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Volume IV
(Old Series Vol. XVIII)

MAY, 1911

Number 4
(Old Series No. 9)

THE SOUTHERN MEDICAL JOURNAL

JOURNAL OF THE SOUTHERN MEDICAL ASSOCIATION

INCORPORATING THE GULF STATES JOURNAL OF MEDICINE AND SURGERY AND MOBILE MEDICAL AND SURGICAL JOURNAL

Published Monthly at Nashville and Mobile. Price $2.00 per year, 20 cents per si

Address Southern Medical Journal, Suite 905 Van Antwerp Building, Mobile, Ala., U.S.A.
Entered as Second Class Matter, July 8, 1908, at the Post Office, Nashville, Tenn.

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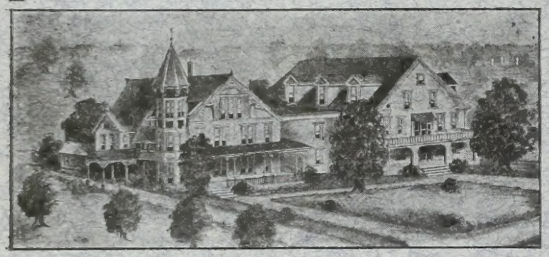

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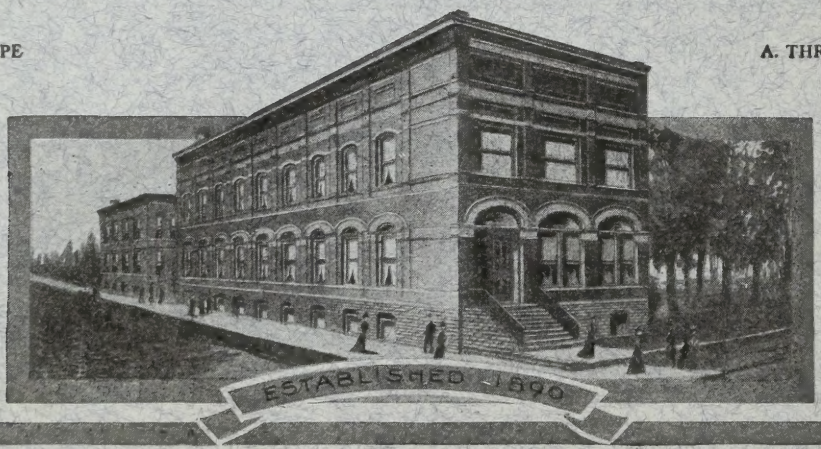

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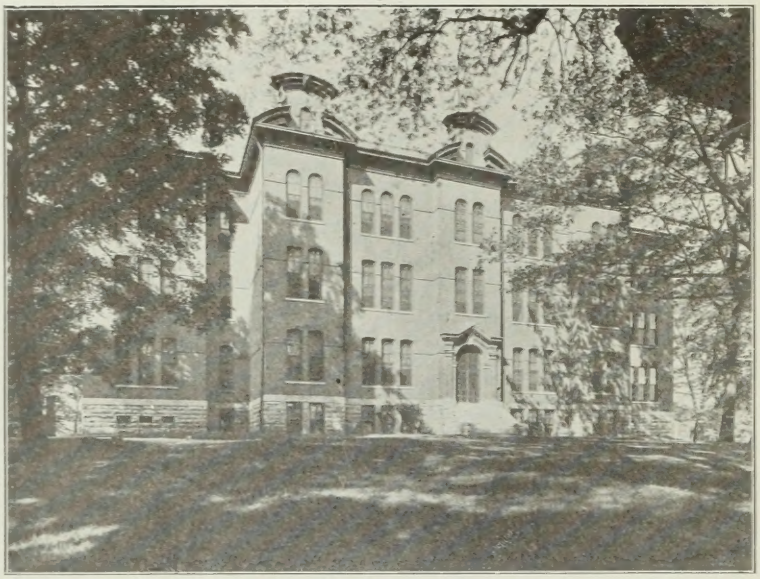

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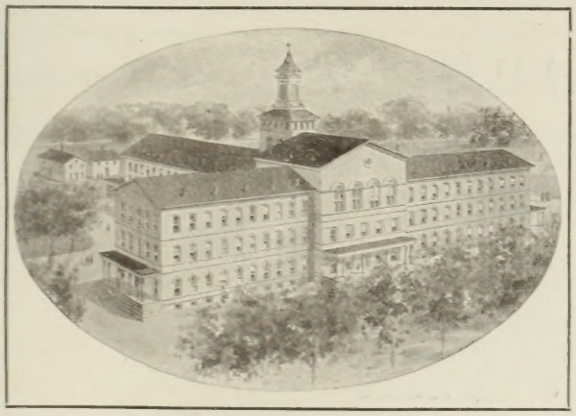

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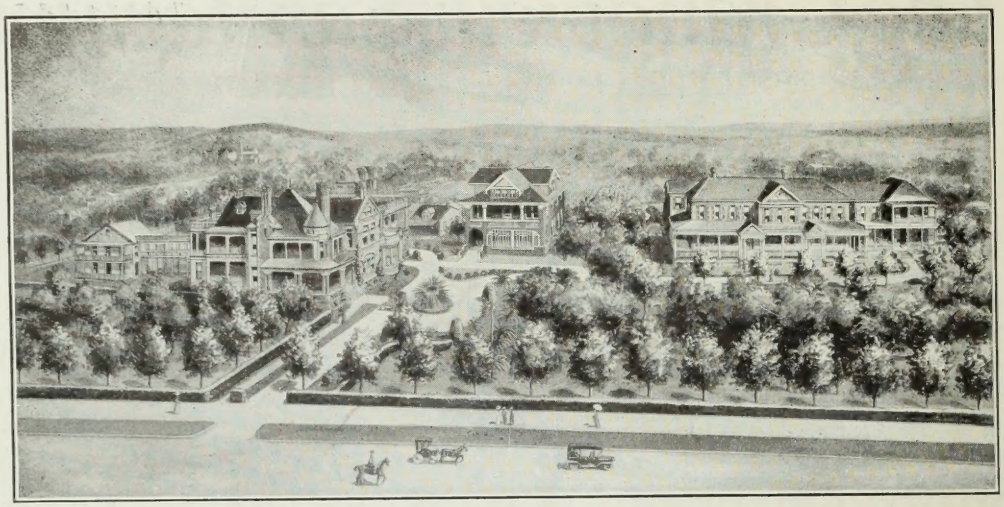

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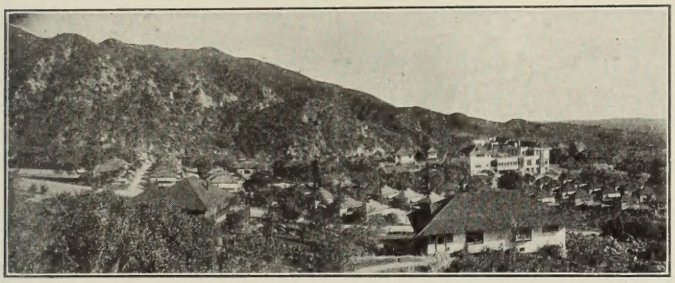

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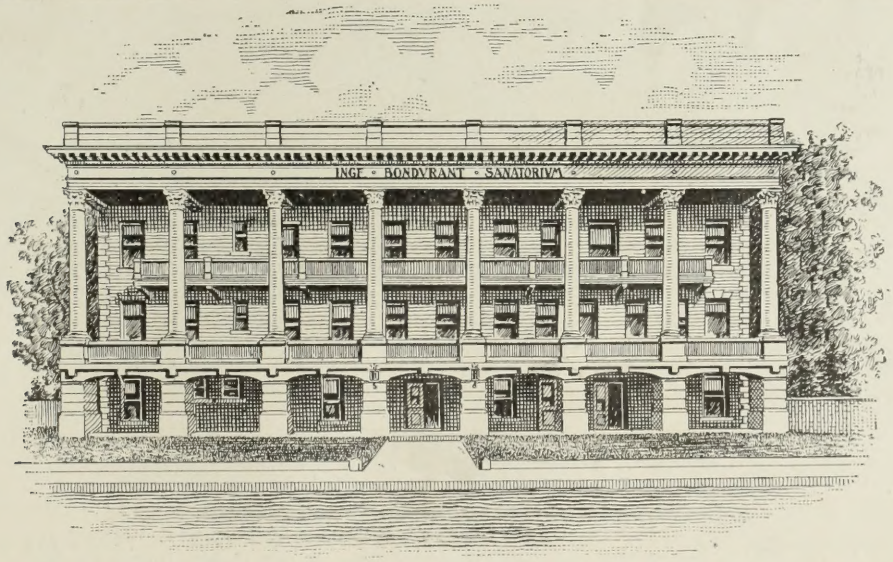

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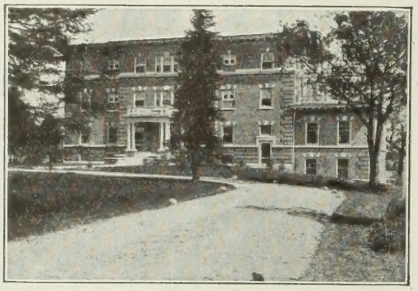

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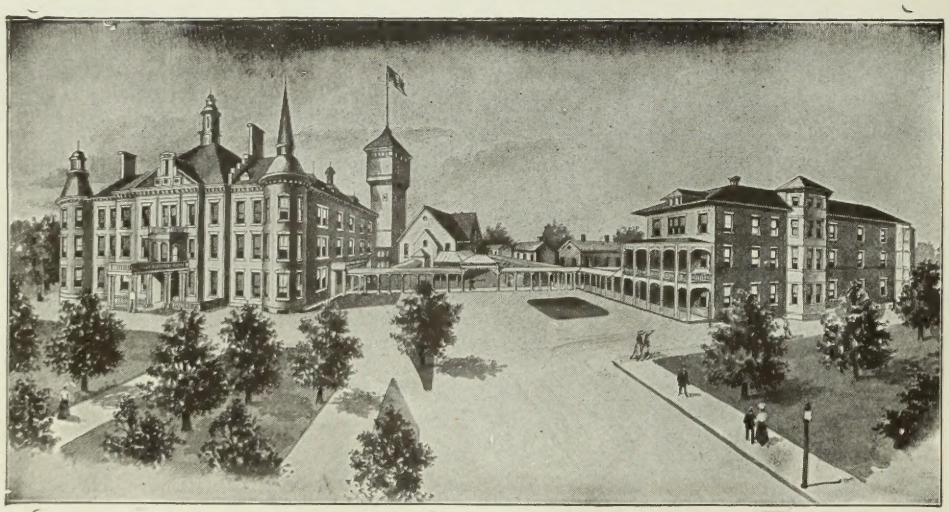

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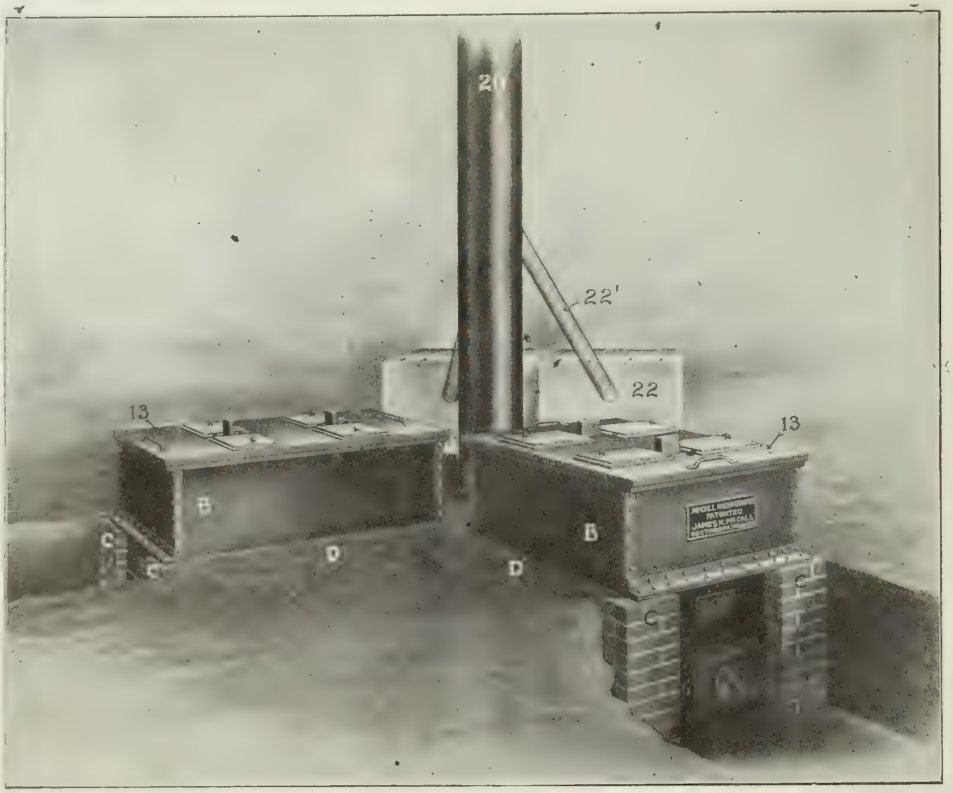

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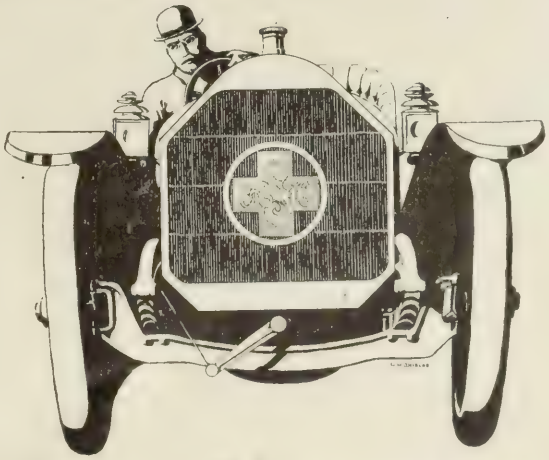

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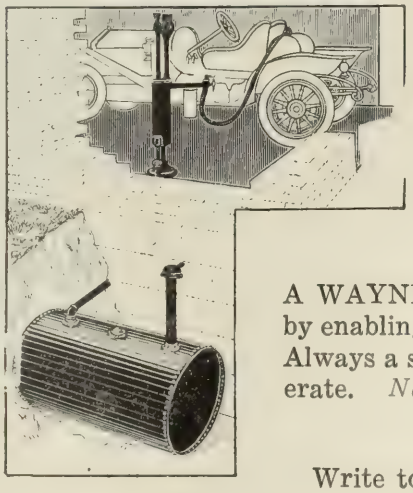

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ORIGINAL ARTICLES

THE INCREASE OF INSANITY.*

By J. T. SEARCY,
Superintendent of the Alabama Insane Hospitals.

The increase of the admissions into the insane hospitals of Alabama in the past ten years was over 45 per cent, while the population of the state, according to the census, has increased about 16 per cent. Figures similar to these can be shown over the whole country—the older states showing a somewhat greater increase than the newer ones. City populations seem to furnish more than the country. Other civilized countries are making similar reports.

This alarming increase is attracting attention everywhere. It cannot be explained by a greater willingness and greater facilities in sending patients to the hospitals; nor by a more liberal admission of all kinds; nor by returns of relapsing cases. These reasons prevailed ten years ago as much as now. There is no alternative but to recognize a large gradual increase of persons so mentally deficient and defective that they come within the jurisdiction of state care.

Another proposition is also apparent; that there is a steadily increasing number of brain and nervous troubles of all kinds. Insanity, in fact, is only a term used to designate such an extreme grade of mental aberrancy that it brings the person within the jurisdiction of the law. Below that degree in mental aberrancies there is an exceedingly great variety, in increasing numbers.

Two terms are now being used to designate mental aberrancy. One is insanity, the other is psychosis.

Insanity is not a scientifically satisfactory term. The medical profession have introduced instead the term phychosis to designate any grade of any kind of mental aberrancy or psychic abnormality. The term psychosis is not limited to a grade of deficiency or defectiveness that brings the person within the cognizance and jurisdiction of the law. It covers the mild cases as well as the extreme "insane" ones. To the physician an abnormal mental exhibit is an indication that there is deficiency or defectiveness in the structures and functions of the convoluted cerebral cortex—the center of the psychic department of the nervous system. It always indicates impairment of structure in this most complicated organ, which relates, in its functions, to the outside of the man, to his environment, and is by far the most important organ in all his body. The man's safety and success depend upon its structural integrity and its functional capacity.

The "conscious," convoluted, cerebral cortex is the center of the psychic portion of the nervous system. From the several sense organs and from most of the structures of the body, living, afferent, centripetal nerve lines bring information into the posterior tracts of the cortex. A large part of these afferent lines are "sensory" or nerves of "feeling"; the others belong to organs of special sense.

It is proper and easy to divide "the nervous system" into two departments; one relates in its functions to the environment, to

*Read before the Medical Association of the State of Alabama at Montgomery, April 18-21, 1911.

all that is outside of the man; the other relates to the organs of internal work—the heart, the lungs, the stomach, etc. The psychic department, which relates to the outside, is originally and largely engaged in obtaining the "necessaries of life," air, water, warmth and food, from the environment—the first object of effort on the part of every living thing; the sub-psychic department of the nervous system is principally engaged in controlling and adjusting the organs that prepare and distribute these necessaries throughout the body.

Every nerve center is the middle of an arc of living action, with lines of nerve fibers, bringing living action to it from one direction, and other lines carrying action from it in another direction. The cerebral convoluted cortex is the center of the psychic arc of the nervous system which relates to the outside. At one end, or at the beginning of its living arc, are the sense organs of seeing, hearing, smelling, tasting, with their afferent centripetal nerve fibers bearing information into special tracts in the posterior portion of the cerebrum; and there is a most complex system of afferent, "tactile," lines bearing "feeling" or "sensation" into special posterior tracts. On the other side of the center, efferent, centrifugal, "motor" fibers bear mandates to the voluntary muscles.

The psychic center, as a result of its reasoning faculties, emits, along efferent, centrifugal lines, mandates to the living voluntary muscles, in execution of its various conclusions, decisions, purposes and desires.

The functions of the psychic center, as of all centers, are tripartite in character. It receives, adjusts and emits, or learns, reasons and executes.

Sentiency is the property or faculty of everything living; is the distinguishing feature by which we pronounce it living. There are all grades of it in Biology. It ranges in the body of man also from a bare exhibit in some least sensitive structures, through all grades of "feeling," "sensation" and "consciousness" in the psychic department. Sentiency is more particularly the function of "sensory" nerve lines and of the "conscious" cortex. A general feeling of comfort or well-being obtains in the sensory tracts of the cerebrum, when not disturbed by the character of the afferent action brought by the sensory nerves.

The psychic center, in men, is as much a matter of hereditary transition along lines of descent as any other organ of the body. Its morphology and physiology, while variable and more easily diverted, come through the generations of antecedent lines, bearing potentialities and abilities that belong to ancestry; improving or declining, as the case may be, in the generations.

Psychic improvement and psychic decadence in the generations are questions of vital individual and social concern, and their study belongs to the medical profession more than to any other.

It is a feature of modern civilization to make it a central object of all social work to continue the lives of all human beings alike, or to give, in human environment, all persons an equal opportunity to live, according to their abilities. When most civilized, we carry these principles of altruism further than to give all an equal opportunity to "make a living," by making it an object of altruistic, beneficiary, social work to render as long as possible the lives of the less competent as well as the competent, and we devote much attention to this feature of philanthropic work. We succeed at it most when most civilized; when we make equally valuable all human lives alike and work for the continuance through generations of the less capable as well as the strong. A result of such beneficent and charitable work is to lengthen the lives of a number of the less healthy and less competent, by improving the environment so that they reach adult life and multiply. In the ruder and cruder stages of our race's history—when we were savages roaming over the plains of Europe—more of the less efficient

persons dropped out in the competitions and vicissitudes of life than they do today. For personal reasons the more competent in our present civilized society, when they become successful, as a rule, multiply less; while the less competent in greater numbers are aided to reach adult life and multiply. They reap the advantages of our sanitation, our improved medicine, of law and government in greater numbers than formerly. Such agencies help them more than the more competent, who are more able to care for themselves. The result is, civilized society deteriorates in the course of generations. All kinds of deficiency and defectiveness increase—psychic inabilities and abnormalities among the rest.

But all observation and statistics indicate that "mental and nerve troubles" are increasing at a greater rate than other kinds. Natural deteriorating heredity, as above described, does not account for it all. There is something unnatural about it.

We have in medicine a long list of narcotic drugs we call anaesthetics and anodynes. All these drugs have their peculiar effects by acting chemically upon the conscious brain and the sensating nerve lines, and are given and taken for the purpose of dulling or obtunding sensation. The anaesthetics, in most frequent use, are chloroform, ether, nitrous oxide, chloral and alcohol; the anodynes are the solutions and aklaloidal derivatives of opium; coca leaves and their derivative cocaine; hyoscine; the coal-tar products; nicotine and caffeine, with some others. All these "narcotics," sometimes misnamed "stimulants," have chemic effect upon the most delicate, colloidal, protoplasmic material which composes the central, functionating portion of nerve cells and fibers, of sentient structures particularly. They are administered in medicine to obtain this effect. They obtund or dull the feeling faculty of sentient structures, possibly by chemically hardening them. The anaesthetics more particularly have effect, like chloroform, ether, etc., in obtunding the conscious function of the cortex, while the anodynes, like morphine, cocaine, caffeine, etc., have chemic affinity for sensory nerve lines—though with the administration of larger doses they can all be made to suspend the functions of the whole psychic portion of the nervous system; and if carried far enough they can be made to suspend the functions of the subpsychic centers that control the heart, lungs, etc.—and the man dies. Chloroform is a typical anaesthetic and cocaine a typical anodyne. Some of these "narcotics" are chemically less active, less toxic and injurious than the others.

Some of the least toxic of these anaesthetics and anodynes have gotten entirely out of scientific hands and are extensively taken as luxuries in civilized society for their peculiar narcotizing effect. Those most frequently used for this purpose are alcohol, nicotine and caffein. The stronger narcotic agents are scientifically used in medicine to chemically fix the sensating structures of the patient, so he cannot feel; while the least toxic are nowadays largely taken by the public as narctoic luxuries without any scientific administration. Women and children very generally use caffein in their coffee, tea and other drinks; men very generally use caffein, nicotine and alcohol. Sometimes other such drugs are taken. The use of the less toxic, in the individual and in posterity, lead gradually to the use of the more toxic—the less narcotic does not relieve the acquired discomfort.

While the chemic combination of any one of these agents with the delicate protoplasm of the sentient cells or fibers of the psychic department continues, the faculty of "feeling" is dulled, or entirely stopped if there is enough in the blood. Because less able to feel, the person feels more comfortable under a slight administration. When the chemic combination is removed the structures are left more or less impaired in the very particular in which the agent had effect; that is, they are more sensitive than before, so that the person "feels bad" more readily. His general hyperaesthesia and malaise, usually, quickly recovers,

however, unless the doses are repeated; in which case after a time he gets up a chronic condition of over-sensitive bad feeling, unless he is repeatedly narcotized with increasing doses. Every such person, in a literal sense, is a "drug habitue," no matter how mild a drug he uses.

Neurasthenia means nerve-weakness, and, so far as it relates to the sensory and conscious structures of the psychic department, it means over-sensitiveness. The neurasthenic person continuously or frequently "feels bad"; that is his leading nerve characteristic. A narcotic drug user, even of a mild one, if not a neurasthenic to begin with, always acquires neurasthenia and increases it the more and the longer he uses the drug, until he begets "the habit," as it is called, which is no more than a condition of neurasthenic bad feeling, which he knows he can relieve by taking more of the drug. Because it is comforting and grateful to him, he calls it a "stimulant." The user of any one of these drugs can be said to have contracted a "habit," when he finds himself readily discomforted when the use of the drug has been discontinued for a few hours, and the degree of his discomfort indicates the grade of his nerve impairment.

Civilized countries ransack the world for articles, principally with which to warm and feed themselves. They also exploit all lands for things for their pleasure and comfort. They have gathered from many directions a number of narcotizing drugs and, more than less civilized people, use some of the least toxic of them very extensively and popularly as luxuries. The initial stages of the effects of such drugs are pleasant. You have only to look about you to recognize the almost universal extent caffein, nicotine and alcohol are popularly taken. Their use spreads itself by reason of mistaken ideas as regards their effects, and because they beget of themselves an increasing demand for their consumption. It is easy to observe a generally increasing "drug-diathesis," hereditarily prevailing in civilized society. Persons are born in increasing numbers with drug neurasthenia. They are "born tired," easily fatigued and discomforted. Drug habitues of all kinds are becoming more and more numerous.

It is true the repeated use of chloroform, ether or chloral much more rapidly impairs brain functions than alcohol does, and the repeated use of morphine or cocaine has a more rapidly deleterious effect than nicotine or caffein; still, the so general and extensive use of these less toxic drugs is having, especially in civilized countries, the effect of individually and hereditarily impairing the sentient structures of the nervous system. The repeated use, also, of any one of these agents tends to render more apparent in the habitue any inherent tendency or predisposition he has to psychic abnormality. In this way they "lead to insanity."

Why insanity is increasing in civilized countries faster than population, I think, can be more readily explained along the lines I have been showing than in any other way.

First, insanity appears, naturally, in all human society, savage and civilized, along with other accidents, diseases and exhibitions of deficiency and defectiveness, most frequently in degenerating lines-of-descent. That certain lines-of-descent are not as generally healthy as their ancestry is the principal "predisposing cause" of all kinds of deficiency and defectiveness, neuropathic conditions among them.

But, second, there seem to be some reasons particularly among civilized people for increasing numbers of abnormalities, because (a) for social and personal reasons the mentally more capable multiply less, and, in the improved environment, the less capable are enabled more numerously to reach adult life and multiply; and, besides, (b) the so general use of the least toxic narcotics, as luxuries, leads, through generations, to still further deteriorating impairment of the psychic abilities of the people.

These questions belong to the medical profession.

THE INFLUENCE OF HOOKWORM DISEASE UPON THE APPARENT AGE OF CHILDREN IN THE COTTON MILLS.*

By CH. WARDELL STILES, Ph.D.,
Professor of Zoology, U. S. Public Health and Marine-Hospital Service.

1. *Stunted Development*—Among the rural tenant whites, children very commonly appear to be younger than they actually are. This is due very frequently to the effects of hookworm disease, which retards their development. Great care must therefore be exercised in estimating the ages of these children. The following cases of hookworm disease, which I saw personally in one series of study, illustrate this point:

Children on farms, never worked in mills—
Age 7 years: 1 male, appears not over 5 years old.
13 years: 1 female, appears not over 9 years old.
14 years: 1 female, appears not over 9 years old.
15 years: 1 male, appears not over 12 years old.
17 years: 1 male, appears not over 12 years old.
1 male, appears not over 13 years old

Children in mill villages, but not at work in mills—
Age 7 years: 1 female, appears not over 6 years old.
14 years: 1 male, appears not over 10 years old.
17 years: 1 male, appears not over 13 years old.

Hands working the cotton mills—
Age 9 years: 1 female, appears 8 years old.
10 years: 1 male, appears 7 or 8 years old.
1 male, appears 8 or 9 years old.
10 or 11 years: 1 female, appears about 8 years old.
12 years: 1 male, appears not over 8 years old; a "dirt-eater," in mill about 3 weeks.
1 male, appeals about 10 or 11 years old.
13 years: 1 male, appears about 10 or 11 years old.
1 male, appears about 12 years old.
2 males, appear about 11 years old.
13 or 14 years: 1 female, appears 11 or 12 years old.
14 years: 1 male, appears about 7 or 8 years old.
1 male, appears not over 8 years old.
1 male, appears about 9 years old; in mill only a few weeks.
1 male, appears 10 or 11 years old.
1 male, appears 11 or 12 years old.
1 male, appears 12 years old.
1 female, appears about 13 years old.
14½ years: 1 female, appears about 11 years old.
15 years: 1 female, appears not over 9 years old.
15 yrs. 10 mos.: 1 female, appears about 14 years old.
16 years: 1 male, appears about 13 years old.
1 male, appears about 14 years old.
17 years: 1 male, appears not over 11 years old.
1 female, appears about 13 years old.
17 yrs. 2 mos.: 1 male, appears 13 years old.
18 years: 1 male, appears not over 14 years old.
1 female, appears about 16 or 17 years old.
19 years: 1 male, development not over 14 years.
20 years: 1 male, appears not over 17 years old
22 years: 1 female, appears not over 17 years old; much stunted in growth.
24 years: 1 male, appears not over 19 years old.
26 years: 1 male, appears 16 years old.

Summarizing these three classes of cases we obtain the following:

Six persons on farms, and never connected in any way with either cotton mills or cotton mill villages, appeared on an average 3.83 years younger than they actually were.

Three persons in cotton mill villages, but not working at the time in cotton mills, appeared on an average 3 years younger than they actually were.

Thirty-three persons, working in cotton mills, appeared on an average 3.25 to 3.59 years younger than they actually were.

From these data it is seen that the stunted growth of the "cotton mill child" is found in persons who never worked in cotton mills and who never lived in a cotton mill village.

All of the foregoing forty-two persons were marked hookworm cases and their stunted growth was apparently due to this disease. This stunted growth is one of the characteristics of severe hookworm infection contracted before puberty; it is corellated with an absence or scarcity of axillary and pubic hair.

The conclusion to be drawn is that the so-called "cotton mill child," like the "cotton mill anemia," is a product—not of the cotton mill, but of soil pollution and the resulting hookworm infection taking place before puberty. As about one-fourth of the children in Southern cotton mills I have inspected are

*At the request of Dr. Charles P. Neil, Commissioner of Labor, an investigation into the prevalence of hookworm disease in the cotton mills was undertaken. Certain portions of the results obtained will be published in the reports to be submitted to Congress by the Bureau of Labor, while the more strictly medical discussions will be published elsewhere. The present article represents one in the series to be issued.

hookworm suspects, and as most of these children come from the rural districts, it is clear that great care is necessary in juding their ages, and the view is not unjustified that the accounts published by various persons, not familiar with this disease, relative to the large number of young, stunted children in the Southern mills, are not entirely free from error of interpretation.

	Males.			Females.			Totals.		
Age.	Mill hands.	Others.	Totals.	Mill hands.	Others.	Totals.	Mill hands.	Others.	Totals.
4	....	1	1	....	....	....	....	1	1
7	....	2	2	....	1	1	....	3	3
8	....	2	2	....	2	2	....	4	4
9	1	....	1	2	....	2	3	....	3
10	3	1	4	2	3	5	5	4	9
11	9	....	9	2	2	4	11	2	13
12	50	....	50	22	....	22	72	....	72
13	37	....	37	17	1	18	54	1	55
14	47	....	47	26	1	27	73	1	74
15	30	1	31	21	....	21	51	1	52
16	23	1	24	28	....	28	51	1	52
17	13	3	16	12	....	12	25	3	28
18	14	2	16	16	....	16	30	2	32
19	8	1	9	13	....	13	21	1	22
20	2	1	3	12	1	13	14	2	16
21	4	4	8	4	....	4	8	4	12
22	1	....	1	7	....	7	8	....	8
23	2	1	3	1	....	1	3	1	4
24	2	1	3	1	2	3	3	3	6
25	3	....	3	3	....	3	6	....	6
26	....	....	....	3	....	3	3	....	3
27	1	....	1	1	....	1	2	....	2
28	....	....	....	2	....	2	2	....	2
29	1	....	1	....	....	....	1	....	1
30	1	1	2	4	....	4	5	1	6
31	1	....	1	....	....	....	1	....	1
32	....	....	....	....	1	1	....	1	1
35	1	....	1	....	....	....	1	....	1
36	1	....	1	....	....	....	1	....	1
37	1	....	1	....	....	....	1	....	1
38	....	....	....	1	....	1	1	....	1
40	1	....	1	2	....	2	3	....	3
41	....	....	....	2	....	2	2	....	2
42	1	....	1	....	....	....	1	....	1
58	1	....	1	....	....	....	1	....	1
60	1	....	1	....	....	....	1	....	1
Totals.	260	22	282	204	14	218	464	36	500

Ages of 500 Hookworm Cases and Suspects—In most instances the cases and suspects were divided into "age groups," but in the following 500 cases and suspects the exact or approximate age in years was obtained.

From the foregoing table it is seen that of 464 hookworm cases and suspects observed in the mills, and whose exact or approximate age was obtained, three were 9 years old, five were 10 years old and eleven were 11 years old; thus nineteen of these cases and suspects, or 4 per cent, were below the legal mill age limit (12 years) of South Carolina (not considering exceptions for vacation or for widowed mothers and invalid fathers). I know of several cases personally where children began to "help" in the mill at the age of 7 years.

The exact ratio of the children under 12 years of age to the total number of employes observed I am unable to give, but I would estimate it as somewhere between 2 and 5 per cent of the total hands seen. Kohn (1907, pp. 110-111) gives it as 1¼ per cent for the mills in South Carolina, based upon mill reports, but expresses the view that about 3.8 per cent would be a closer estimate. My estimate of 2 to 5 per cent was made before I was aware of Kohn's estimate. For more exact figures, the reader is referred to the reports which are in preparation by the Bureau of Labor.

2. *"Helping" in Mill*—It is a very common occurrence to find a small boy or girl in the mill and to be told that he or she is "not employed" by the mill, but is simply "helping his mother" or "sister.

The real facts about these "helpers," as explained to me both by mill managers and mill hands, seem to be as follows:

The mills cannot, under the laws, hire these young children, and from an administrative point of view it is difficult to see any reason why they should wish, or even be willing, to do so. A girl who is working in the mill happens, however, to have a younger brother or sister who is under mill age; the wage earning sister is paid according to the number of "sides" she can run, and if she "runs" eight sides at, say 12½ cents per side, she earns $1 per day; if her younger brother or sister "helps" her, the two together can run, say,

ten "sides" per day. The younger sister does not appear on the pay roll, hence the mill is not employing the child under the age limit; the work of the young child does not appear to her credit on the rolls, but the older sister receives credit and pay for ten "sides" per day, say, $1.25.

The older sister argues that her little sister might just as well help her in the mill as help her mother with the housework at home —the child is not being "employed," and no law is being broken.

The system of "helpers" is therefore in fact an invasion of the law, for which the hands themselves, not the mills, are chiefly responsible.

According to my observations, the majority of mill managers are against allowing these helpers in the mill and would put a stop to them if they could. But the situation as it appears to me is simply this: If the mill puts the "helpers" out, that particular family moves to another mill and the scarcity of labor is made just that much worse for the mill which tries to stop this evasion of the law.

If this system of "helpers" is to be stopped it can be successfully done, so far as I see, in only two ways:

(a) By legally prohibiting any persons under the legal mill age from *entering* the mill work rooms. This, however, means hardship in certain cases. Still such cases will probably be exceptional.

(b) By a mill association agreement to exclude "helpers." This plan, however, to be successful, involves inducing all the mills to join the state association.

Of the two plans, I believe the former the better, as many of the mill hands resent any restrictions made by the mills, but accept in more or less good faith restrictive laws.

3. *Mothers in the Mill*—In a number of cases I have found children 4 or 5 years old, playing on the spinning room or spool room floor, but I have never seen them in the weave or in the card room. The assumption that these children are "mill hands" or that the mills are trying to make them work is hardly one to be discussed seriously. In the cases which I saw, the children's mothers were at work, and they brought their children with them for the simple reason that they saw no other plan open to them. For the mills to prohibit the mothers from bringing such young children into the mills would be excellent administration and a plan certainly most mills would gladly adopt, but I fear that in many cases it would mean increasing a widow's difficulty in her efforts for self support. The kindergarten, provided by some of the mills, is of course a good place for these children; but these kindergartens are not open all the day, every day, or all the year. Facing now the practical fact of poverty on the part of a deserted or widowed mother with a 4-year-old child, is it charity to forbid her from taking her child to the mill? Or is it a greater charity on the part of the mill to permit her to bring her child with her? There are two sides to this question.

4. *Ambition to Enter the Mill*—The average child in a cotton mill family seems anxious for the time to come when he can go with the older children to the mill. This ambition may perhaps be cured by a few months of work, but it is nevertheless common in the young children. In order to go to the mills, there is little doubt in my mind that many of them will practice deception in regard to their ages —and this will probably account for some of the young children in the mills.

5. *False Statement Regarding Age*—I have heard of cases where the parents compelled the children to lie about their ages, but personally during five months of constant study of mills (from another point of view), with almost daily and often intimate contact with the mill hands, cases of this kind did not happen to come to my personal knowledge. It is very probable that I would have found some if I had hunted for them. Certain it is that it is sometimes amusing to see what a large number of children are *just above the legal age* for mill work, and there is no doubt

in my mind that parents will in some cases make false statements regarding the age of their children in order to get them into the mills.

6. *Ignorance Regarding Age*—A very large number of these children have no idea of their exact age. This may seem strange, but it is a still stranger fact that in many cases their fathers are about as ignorant on this point as are the children. In general the mother is the only member of the family whose word on this point is, in my experience, to be taken as trustworthy. These statements refer not only to the mill hands, but to this class of people generally—on the farms or elsewhere.

The following cases, in which there was no possible object in deception, will serve to illustrate these points:

In A——— I saw a little girl, certainly at least 10 years old, in the mill, but she positively maintained that she was "five."

In B——— I met two sisters in a mill. Upon my asking their ages, each claimed she was older than the other; the father was called upon to settle the question, and the three together, after much discussion, finally agreed that one would be 16 in November and the other 16 *the following May* (!), but still they could not definitely decide which was the elder. Finally the mother came into the room and settled the question by stating that one was 14 years and 6 months and the other 15 years and 10 months old.

In C——— I noticed a young boy who had hookworm symptoms. I asked the superintendent how old the boy was and received the reply that he was 13 years old; I ventured the opinion that he was at least 15; the superintendent laughed at the idea; the boy stated he was 16; the boy's father confirmed this claim and offered to prove it by the record in the family Bible; at his house I examined the record and found the boy to be 17 years and 2 months old.

Both on farms and in mills, it has been an absolutely common experience I have had among the tenant whites to be told by boys and girls and also by their parents, in reply to questions, that they do not know how old they are.

Summary—From the foregoing it will be seen that while hookworm disease fully accounts for some of the statements relative to the young age at which children work in the mills, this explanation does not account for all such statements—in fact there are a number of children under mill age to be found at work in the mills.

Is a physical examination better than an age limit? Personally, I believe that a physical examination by local medical officials—say the secretary of the local board of health, or, better still, by agents of the state board of health—would be a more ideal plan than the present age limit laws. By a physical examination law, not only would many cases of disease, which might not otherwise come under medical attention, be forced to undergo treatment as a prerequisite to working in the mills, but cases of pulmonary tuberculosis, which might otherwise enter the mills, could (as they should, in justice to the other hands) be excluded from the mills. Such a plan would be a radical innovation in this country. *If of practical application* (a point in regard to which there may perhaps be a difference of opinion) *it would assuredly be far superior to any law demanding an age limit, and, in addition, any person who would under existing circumstances be justly excluded from the mill by an age limit law would also be excluded by a physical examination law.*

THE EFFECTS OF SOME DISEASES, HABITS AND HEREDITY UPON LONGEVITY.*

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MR. CHAIRMAN AND GENTLEMEN: There are a number of diseases, occupations, environments, heredity and personal habits that enter into the longevity of the human race. While there are many more, the brevity of this paper will only permit us to consider four or five of these diseases, or conditions, with which we have personal experience.

Intemperance in drinking is the first of these habits, or conditions, which we will consider, for the drinking habit, treating, the social glass, is considerably in evidence among many of our best citizens as well as among the other classes of society. The excessive drinking habit is injurious to the individual and to longevity, not only from the diseases which follow in its wake, but it is the likelihood that the chronic drinker will become engrossed in difficulties, broils and feuds, which he would otherwise avoid, that tends to make the chronic drinking man's life hazardous in the extreme. It should be remembered that the majority of moderate drinkers constantly increase in their habits and tastes for liquor, as it is a drug that enslaves; the moderate drinker of today is oftentimes the confirmed inebriate of the future. It has been said that a runaway horse is never safe in harness after he has once kicked out; it is also true that 90 per cent of the chronic drinkers keep up their bibulous habits until death claims them, regardless of the many so-called drug and liquor habit cures that are foisted upon an unsuspecting public.

It should also be remembered that Venus and Bacchus go hand in hand; the man who drinks excessively of wine very often ends up his escapade in looking up some Venus to consort with, from whom he is liable to taint his blood with a disease that may not only follow him to his grave, but be perpetuated to his children and generations which may follow.

If any one present in this audience will reflect over their college days, and remember the friends they had with the unquenchable liquor thirst, not only during the Christmas holidays or banquet times, but day in and day out during the year, you will find that they have long since joined the great majority. As medical and educated men you know the most fertile source of cirrhosis of the liver, nephritis, gout, rheumatism, gastritis, malignant diseases and ulcer of the stomach, arterio sclerosis, apoplexy and many other of the diseases which figure most prominently in our mortality statistics, are attributed directly or indirectly to the excessive use of alcoholic stimulants in one form or another.

When we study statistics on the subject we find that one out of every ten bar-room or inn keepers die from alcoholism or its effects and that only two clergymen out of every thousand die from the same cause. Frau Jurke was a chronic drunkard who was born in 1740 and died in the year 1800. 709 of her 834 descendants were traced, with the following result: 106 were illegitimate; 142 were beggars; 64 were charges of the state; 181 females were prostitutes; 69 were convicted of crime; and all told the descendants of this one dissolute and dissipated woman cost during the period of seventy-five years a sum estimated at $1,250,000. It does not matter whether this degeneracy was the result or the cause of alcoholism, the effect is the same on the community at large.

Heredity plays an important part in longevity. While not more than two or three diseases are transmitted from parent to child, predisposition to diseases are often inherited. To illustrate: We could not inherit

*Read before the American Life Convention, New Orleans, La., Feb. 24, 1911.

freckles, but we do inherit the blonde complexion and thin skin that makes the child freckled as soon as exposed to the sun; so many of the tendencies to disease are inherited in this way. The following ten laws of heredity are usually acknowledged to be correct. "Church & Peterson."

1. The child tends to inherit every attribute of both parents.

2. Contradictory attributes cannot be inherited from both parents.

3. The child may inherit the attributes of either parent solely.

4. It may inherit the qualities of one parent in some respects and of the other in other respects.

5. It may inherit the father's attributes for one period of existence and the mother's for another.

6. Some attributes have the quality of prepotency, or the tendency to push aside or overrule other attributes.

7. Attributes which are similar in both parents tend to become prepotent, giving rise to convergent or cumulative heredity.

8. Attributes may be transmitted in latent form from one generation to another, to reappear in a third or fourth or still more remote generation—a phenomenon termed "reversion."

9. Attributes tend to appear in the progeny about the same time of life in which they become manifest in the parents.

10. Attributes of the father tend to be inherited by the sons and of the mother by the daughters.

No one will deny that heredity plays an important part not only in tuberculous and cancerous affections, but it is equally true of albuminuria, rheumatism, apoplexy, gout and many other diseases. Maudsley has said: "There is a destiny made for a man by his ancestors, and no one can elude, were he able to attempt it, the tyranny of his organization." It is well understood that in these cases with a predisposition, or lack of resistance to infection, there is a fertile soil, and when once, for instance, the tubercle bacillus is transplanted into such soil, the story of the case is soon entered in our mortality tables.

Notwithstanding the repeated declarations by numerous leagues that consumption is not hereditary but infectious, that consumption is a house disease, and that we are infected through milk, meat, kissing and dry sputum that is inhaled, nevertheless the one fact remains potent that the insurance companies had to pay a heavy price for their knowledge of the fact that risks of tuberculous parentage have a higher mortality than from those families whose parents are not tainted with the disease. We can readily understand the fact that the tubercle bacillus cannot infect the spermatozoa or germ plasm, but the ovum that is impregnated and developed in the womb of a tuberculous mother for nine months stands a strong chance for direct infection through the placental connection and that underweight persons from such mothers have had exceedingly hazardous mortality; for while we may not inherit tuberculosis we do inherit a lessened vitality, or a tendency toward the contraction of tuberculous diseases, which has decimated or wiped out of existence many families.

Out of one hundred cases of tuberculosis investigated in a hospital, where records were not perverted as they often are, 70 per cent of the cases had a tuberculous parentage. The fact of the matter is that the tuberculosis tendency is inherited; the disease is also infectious. This is the reason for increased mortality in underweights who inherit this lessened vitality. We must also take into consideration the fact that not only underweights may inherit this tendency, but that their brothers and sisters inherit the same predisposition; so they run the double risk of not only inheriting the tendency to tuberculosis, but perhaps later in life becoming infected by living with their brothers and sisters, any of whom are liable to develop the disease. Not only is the death rate from tuberculosis exaggerated from such tainted stock, but the mortality

from many collateral diseases is very much increased from parents tainted with tuberculosis.

It is estimated that one-seventh of all deaths are from tuberculous causes, and that between the ages of 18 and 35 one-fourth of all deaths are of tubercular origin. In twenty-five years we have had about 23,000 deaths in New Orleans from tuberculosis with approximately only 800 deaths from yellow fever, showing the great mortality from tuberculous diseases.

Syphilis and diseases resulting from it add largely to our mortality tables.

If "606" or salvarsan comes up to its expectation or promises, which very many careful and conservative medical practitioners doubt, there will have to be a rearrangement of mortality statistics coming under the class of syphilitics. It is expecting too much that one injection of an agent which in some form or other has been used since almost the very beginning of medicine, should revolutionize the hazards of a loathsome disease, rendering it innoxious for all times by a single injection. It is essential in every case where we have a syphilitic case under consideration to be sure of our diagnosis, because many laymen are not expected to understand the difference between chancre and chancroid; so that quite a number among the laymen have honest doubts on account of this supposed infection from syphilis, which in reality in some instances was a mistaken diagnosis. With the Wassermann reaction and the discovery of spirocheta pallida, a great deal of light has been thrown upon the diagnosis of this disease, and we can come to conclusions with very much more accuracy than before these discoveries were made.

While we have very few exact statistics in regard to the number infected in a given population, as a rule we think the percentage rate of infection by syphilis as given by specialists is rather higher than actual experience would justify. Some have contended that as high as one in six in city population have been infected either by acquired or hereditary syphilis. Some of our Southern physicians have stated that nearly all of our negroes are syphilized, and that tuberculosis and syphilis will finally end the race question, as tuberculosis is three times more prevalent among the colored than it is with the white people. It is my personal experience during twenty years of active practice in New Orleans that this ratio of infection, one in six in syphilis, is very much exaggerated; perhaps one in twenty-five would be nearer the truth.

Fournier states that "in 2,395 cases of syphilis in which the date of invasion of tertiarism could be determined exactly, 106 died in the first year, 227 the second, 256 the third, 229 the fourth, 205 the fifth and 201 the sixth year. So that the tertiary form is reached in more than one-half the cases within six years. The deaths from the tertiary results and complications of syphilis have been so numerous that Runeberg finds double the expected mortality in all those who admit ever having been infected; so syphilitics have very little chance of reaching old age.

The following rules have been given and followed by many of the most conservative medical directors of the country at the present time: No person under the active treatment of a well defined case of syphilis is insurable until six years after date of infection and two years of actual anti-syphilitic treatment has been carefully carried out. Any evidence of tertiary syphilis is a ground for rejection. If there is no glandular enlargement, eruption, or mucous patches, following a supposed infection after six months of waiting, the patient might be insured. It is our opinion, based upon actual experience, that many syphilitic subjects properly treated with iodide of potash, mercury, or cacodylate of soda, with proper hygienic dieting and hot bathing, can be actually cured, as proven by no tertiary symptoms appearing and the union of marriages of these patients resulting in perfectly healthy and normal children; such a result can only be expected where the in-

telligence of the patient and the persistency of the doctor follows up the treatment to its legitimate end. As a matter of course we would not encourage or advise marriage in all such cases, but after six years have elapsed without a symptom, we think the ban of celibacy could be properly removed.

Malaria, like many other diseases, has had much of the venom or sting extracted from it. You remember the fearful mortality that almost decimated the laborers under De Lesseps in his efforts to excavate the Panama Canal. The mortality at that time from both malarial and yellow fevers reached unprecedented records. These diseases as much as political graft and inefficiency caused the abandonment of the project by the French government, after twenty years of disastrous experience.

As a matter of course, you all know the history of Dr. Gorgas' sanitary work in Panama, which has reduced the mortality on the isthmus to 15 per 1,000, or about equal to the mortality rate in our best sanitated cities in the United States. What has been done in Panama has, to a limited extent, been duplicated in our Southern states. Not so thoroughly as a matter of course, because one is done under military regime and the other by sanitary inspectors and boards of health, with less power of enforcement of regulations. Another condition which has helped on the isthmus has been the issuing of rations of quinine just the same as food. This compulsory prophylaxis or taking quinine by the ton has helped to eradicate the malarial plasmodium. The drainage of the swamps and lakes to destroy the breeding places of mosquitos has also had much to do with its reduction, but so long as a number of people were acting as hosts as between the mosquito and the next man to be inoculated, there could be no definite stamping out until the population of the zone had been practically cinchonized.

In our Southern states the great majority of the anophiles mosquitos perish or hibernate during the winter months, but the malarial plasmodium lives through to the next spring in the blood of malarial subjects; so it is virtually the man, and not the mosquito, that carries over this disease from one season to another.

Dr. Harris says: "Malaria, though decreasing in severity and frequency, continues as one of the most prevalent diseases in many localities in the United States. In 1900 the number of deaths reported from malaria was 14,900. The seriousness of the disease and the importance of medical cure should be more emphasized, especially as quinine, taken long enough, is almost a specific for the disease. The most marked effect of malaria is seen upon the renal organs and vascular structures; consequently in malarial countries the death rate is high and the mortality from nephritis and various forms of paralysis is inordinately increased. There would be little chronic malaria if acute cases are cured, but there are today probably two or three million persons in the United States who are harboring malarial parasites. The microscope is not always a criterion to chronic malaria; undoubtedly the disease exists without the presence of the parasites in the peripheral circulation. There should be a campaign of education begun with the medical profession, because physicians as a class do not appreciate the seriousness of malaria or the ease with which it can be eliminated.

It has been reduced 65 per cent in five years in Italy by the free use of quinine. All duty on quinine or peruvian bark should be removed. Boards of health should furnish the drug to poor people free in malarial sections. If we had the power to cinchonize our infected population in the winter time, and to drain our swamps, lagoons, marshes, and oil our lakes, we could get rid of malaria altogether. But the most optimistic can hardly expect this consummation at least during our generation. Within a period of twenty years as a practitioner and teacher of medicine in this city, I have personally witnessed only one death

from malarial fever, and that was of the congestive or aestivo-autumnal type at Ruddock, La., a point forty miles above the city.

The anophiles is a back-of-the-city, country, lake or swamp bred mosquito, and is not very prevalent in New Orleans, except on the lake border, or where there is stagnant water. I think that the blood of three-fourths of the inhabitants of this city would be negative as to the malarial plasmodium. We very rarely see malarial chills in this city, except from patients who have migrated from the country. So far as the effect of malaria on longevity in New Orleans is concerned, I would consider it of no very great importance. The parishes along the river front are less infested with malaria than are the lands on the lakes, bayous and lagoons that exist further back in the swamps. This has caused the majority of insurance companies to remove the five and ten dollars extra per one thousand which they originally charged against applicants living in the swamp section of the South, and very many of these companies have gone into previously prohibited territory to solicit business. This is dependent upon two causes. A great many of these farms and sections of swamp lands have been better drained, houses and beds have been screened, even our colored population, who are not subject to malaria, know the preventive effect of the free use of quinine. So the numerous deaths formerly recorded from congestive malarial fever and malarial hemaeturia, have given place to the milder forms of chills and fever, which are only harmful to longevity from its destruction of red blood corpuscles, producing anaemia, congestions of the liver and spleen, etc., rendering the patient more vulnerable to other diseases, or coming in as complications to pneumonia, Bright's and any of the acute infectious diseases.

If starvation has claimed its thousand, overfeeding has claimed its ten thousand.

One of the worst results of the habit of gormandizing and excessive drinking is gout, and the diseases apoplexy, Bright's and vascular trouble, which so often accompany it. One of the actuaries for a large New York life insurance company showed only 48 deaths from gout in a period of 40 years, as some other cause than gout is usually given when death takes place, though from the previous history and attacks of gout it was plainly evidenced that these subjects had rheumatic or gouty tendencies when insured. The pecuniary loss to the company from such risks is four times greater among gouty and rheumatic applicants than it should be. Such subjects have always been considered hazardous risks, particularly as these patients usually live in large towns and cities where the appetites that they have cultivated are kept up as is the case of drinking habits which often increase, and this is productive of both the gouty and rheumatic diathesis. In exceptional cases such applicants have lived out their three score and ten, but it is the general average, and not the exception, that we have to deal with in mortality tables. As said before, it is thoroughly known to all medical directors that where the immediate cause of death is given as apoplexy, heart disease or kidney trouble, gout was the real contributing cause, which had rendered the life hazardous from the time it was insured. Current text books say "the outlook for gouty and rheumatic patients is seldom favorable." The course of gout and rheumatism is ever a downward one, and may be cut short at any period by the rapidly coming on of organic degeneration in the blood vessels, or to intercurrent maladies, such as heart and kidney diseases, apoplexy and pneumonia, to which all gouty patients seem particularly liable. Such cases should only be insured after there has been an absence of attacks for four or five years where habits have changed and where the hereditary tendency is not well marked. Even then it is perhaps better to give only endowment insurance.

Overweight subjects carry the suggestion of overfeeding or overdrinking. The experience of medical men in dealings with such

patients has been hazardous in the extreme. There is a French adage that "We dig our graves with our teeth."

While overeating is not so damaging as intemperate drinking, it is nevertheless one of the common causes of short life history. This can be readily understood when we contemplate the fact that the average well-to-do person eats twice as much as his necessities require. The food is very often improperly cooked and masticated, which is as damaging as the overeating. Gladstone, who lived to be 97 years old, was reputed to have masticated every morsel fifteen times, so that the food was thoroughly mixed with the salivary juices and in an absorbable state before it entered the stomach at all. Overeaters, drinkers and gormandizers should remember that the twenty-nine feet of alimentary canal is the sewer of the system, and that it is more risky to neglect the one within you than the one on your premises.

The large meat eaters and wine drinkers should know that food undergoes the same decomposition within this human sewer as it would undergo if improperly kept and treated outside the body. The ptomain and other poisonings, of which we read so often in the daily press, are but records of this decomposing food products within the body. These, however, are the acute results, which impress themselves forcibly upon the mind, but it is the slower results upon the liver, upon the hardened arteries and overchoked kidneys, dilated stomach with gaseous distentions, that are some of the secondary results of this overfeeding, which are only too often referred to other mortality causes. As heart and kidney diseases very often go hand in hand with intemperance in both eating and drinking, it is the overloading of the system with indigestible food and beverages that is very often the starting point of many of the sudden deaths. As said before, gout and rheumatism are two other diseases high in the mortality tables, which are very often traceable to overeating and drinking.

The average man fifty years old weighing 200 pounds and less than six feet tall is almost sure to have hyaline or granular casts in his urine if he has been an excessive eater or drinker. The lack of elimination in such subjects on account of constipated habits and improper action or lack of action of the kidneys and liver, have led to numerous fatalities that otherwise might have been averted.

The army and navy rules are two pounds to the inch up to five feet seven inches; after this height seven pounds may be added to each inch, and still be within the range of acceptance. If you will exclude the lightweights with no consumptive histories or taints in the family, they have greater longevity than those heavyweights who are addicted to intemperance both in eating and drinking.

ABSTRACTS FROM AN ORATION—"THE COMMERCIAL DOMINATION OF THERAPEUTICS, AND THE MOVEMENT FOR REFORM.*

By GEORGE H. SIMMONS, M.D.,
Chicago.

We have long suffered from a want of governmental or other supervision over the manufacture of medicines. In no other country has the standard and quality of drugs been left entirely to the manufacturer's honor. From time to time the medical profession has made spasmodic, but weak, efforts to remedy the condition: we find records of this even as early as the beginning of the nineteenth century.

*By permission of the author, from Journal A. M. A., May 18, 1907.

The pharmaceutical profession bears the same relation to the medical profession that the ordnance department does to the army in the field. The fighting force is not expected to know how to make a rifle, or to have a practical understanding of the manufacture of powder and shot. The men on the firing line know how to use, but not how to make the ammunition. But nevertheless the efficiency of the men at the front is largely dependent on the integrity and honesty of the supplies of the ordnance department.

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As may be remembered, the remedy suggested was the creation of a body of pharmacists, chemists and pharmacologists who should act for the profession and examine the products on the market, or at least take up the subject from a practical standpoint.

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The matter was presented in detail to the Board of Trustees at its meeting in February, 1905. After discussing the matter fully the trustees authorized the creation of the board, and specified that it be known as the Council on Pharmacy and Chemistry.

Thus it is that the profession now has at its service a group of men who, for this work, possess special training and technical knowledge. Their energies are devoted to the thankless task of winnowing from the chaff of dishonesty the occasional grain of honesty.

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INDIRECT ADVERTISING.

This indirect advertising to the public was the first evil to be overcome, and the first principal adopted by the Council is incorporated in what is now known as Rule 4. It is as follows:

> No article will be admitted whose label, package or circular accompanying the package contains the names of diseases in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to literature distributed solely to physicians, to advertising in medical journals, or to vaccines and antitoxins.)

It is this rule that has met with opposition from those who are not satisfied with the doctors' patronage, but want that of the public also. It is this rule that is of most importance to the physician, for its enforcement will check one of the worst evils connected with the proprietary medicine business—that which makes the doctor an advertising medium to the public.

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It has become a recognized fact in the "patent medicine" field that the easiest and cheapest way of reaching the public is by advertising through the doctor. Let me quote a paragraph that appeared in Printer's Ink, an advertising journal, some two or three years ago. The words are those of a "patent medicine" man and, of course, were not directed to physicians.

> But the patent medicine of the future is the one that will be advertised only to doctors. Some of the most profitable remedies of the present time are of this class. They are called proprietary remedies. The general public never hears of them through the daily press. All their publicity is secured through the medical press, by means of the manufacturer's literature, sometimes gotten out in the shape of a medical journal, and through samples to doctors. For one physician capable of prescribing the precise medicinal agents needed by each individual patient there are at least five who prescribe these proprietaries. They are the chief standby of the country practitioner. . . . Three-fourths of all the prescriptions received are for these proprietary remedies, and the pharmacist simply opens the package and writes a label, "A teaspoonful three times a day before meals." . . . The original bottle is given to the patient. He sees that the remedy does him good, and when he feels a trifle run down again he goes to a drug store and buys another bottle, not troubling the doctor. He meets a friend on the street who is not looking well. "I know exactly how you feel," he says. "Now, just go and buy a bottle of ———. Best thing in the world. My doctor prescribed it for me, so it isn't a 'patent medicine.'" In this way the name of the remedies advertised only to physicians get abroad to the general public. . . . The proprietary medicine of the future, though, will be advertised through these channels. The medical papers will reap the harvest, and the physician himself, always so loud in the denunciation of "patent medicines," will be the most important medium of advertising at the command of the proprietary manufacturer. In fact, he is that today.

Have you ever seen an arraignment of this evil by its enemies which equals this cynical statement of its friends?

Now, while I am quoting, let me quote

something else. This is from a book written by Mr. George P. Rowell, entitled "Forty Years an Advertising Agent." Mr. Rowell, as some of you may know, dabbled somewhat in the "patent medicine" business himself. He is the one who created Ripans Tabules. In this book, by the way, he tells how he came to put this preparation on the market. In the chapter from which I shall quote he described the "patent medicine" business in an interesting way, and tells of the fortunes that have been made and also lost. He has this to say about an "ethical" proprietary that some of you may have heard about:

"We had a successful advertiser in Halifax, N. S., who sold a medicine known as Fellows' Hypophosphites, that proved so good that some shrewd business men in the medicine trade, who knew about it, bought the trademark, incorporated a company with a capital of $100,000,000, retained the original owner as manager, stopped all advertising except in medical journals, and thereafter pushed the sale only through the medical profession. I had information at one time of a young man who was heir to an uncle, recently deceased, and had come into possession of a certificate of stock of this company, of the face value of $6,000, and made up his mind that, shrewd as the old gentleman was, he had, without doubt, acquired trash in this instance, and I heard further, that the young man began to think better of the doubtful asset, when one day a dividend check came; and when, at the end of the year, he realized that within the twelvemonth that $6,000 certificate had brought him $9,000 in dividends, he began to revise his estimate of his deceased uncle's prescience in making investments."

As a "patent medicine" it was not a success, but as an "ethical proprietary" it has been proving a gold mine. So, since that time this medicine has not been advertised except to doctors through medical journals, has it? Look at the wrapper around the bottle, read the label on the bottle, notice the name blown into the bottle, and then will you doubt the statement of the average druggist when he says that nine-tenths of Fellows' Hypophosphites is sold over the counter direct to the public and that the doctors are responsible?

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No article shall be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication. The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives, if present, must be furnished.

There was little discussion when this rule was under consideration. Even the verbiage was soon agreed to. It is so palpably consistent, so absolutely fair and just that one would have imagined that it would receive universal approval. But do you remember the protests of certain medical journals when the first announcement was made and these rules published? It was simply outrageous, we were told, that enterprising firms which had spent money and time in getting up a fine combination should be asked to state what the combination contained. One New York medical journal even went so far as to send a circular letter to the manufacturers offering them space in its columns for an expression of their views in regard to the outrageous attempt that was about to be made to injure their business. Certainly, this attack on vested rights was scandalous, and it was a good thing that the proprietary people were so well guarded by a journal that is published in the interests of physicians.

But the proprietary gentlemen were too wise: they did not accept the offer, since nothing appeared from them. In fact, the majority of the nostrum men have said that they always have been, still are, and always will be willing to tell physicians what their preparations contain. They agree that physicians should know what they are prescribing, that it is very necessary they should know. It would be wrong, indeed, if physicians should prescribe without knowing what they are prescribing, say these gentlemen. Surely! And the more quackish the preparation and the "company" that exploits it, the more willing

they are to give a formula. Mind you, I say "a" formula.

The idea that the publication of a formula will make a preparation ethical has been harped on and emphasized until many believe it. Now, the fact is most of the proprietary mixtures are simple combinations of well-known drugs that any pharmacist, or even an average physician, could compound if the active ingredients were known. Therefore, would not the makers of such preparations be very foolish to give the correct formula even as to the active ingredients? Surely they would be, and the average nostrum maker is no fool.

I presume it is unnecessary to say that the Council is not satisfied with "a" formula, but demands "the" formula.

Rule 6:

No article will be admitted or retained of which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to therapeutic value.

Of course, the principle underlying this rule is so elemental that one might think that it would meet with no opposition when put into practical application. Yet its actual enforcement has caused much trouble in spite of the fact that there has been a liberal interpretation of the literature. The diversity of opinion and varied experience in the use of therapeutic agents has been recognized and the Council has admitted every reasonable claim, everything short of absolute misstatement and palpably false pretension.

Other rules:

The three rules above considered meet the most objectionable features of proprietorship in medicine. Indirect advertising to the public through the physician, secrecy in composition and false therapeutic claims. The enforcement of these three rules would do away with the main evils connected with the proprietary business, and incidentally would wipe out a goodly number of the products.

Rule 8 is as follows:

If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character, or is, for any other reason, objectionable, the Council reserves the right to include with the trade name a descriptive title in the book. Articles bearing objectionably suggestive names will be refused consideration.

The last sentence was not in the original draft; experience showed the necessity of such a rule. I doubt if any one will think this an unwise precaution when we run across such names as: Gonosan, Gonorin, Gonoral, and Gonol, names certainly suggestive enough even to the most ignorant layman, and remembered without difficulty by those who wanted to tell their fellow-sufferers what they were taking. Genitone, Vaginol, Oophorin, Virilin, Rheumasan, Bronchitin, Pneumin, etc., are others. I am not quoting fanciful names from the "patent medicine" list; they are all advertised to physicians as scientific preparations.

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Many manufacturers, believing that the publication of certain information would detract from their value, have often volunteered to furnish information for the private use of the Council. The Council, however, does not receive trade secrets, but insists that all information it receives may be published at its discretion. The Council desires information for the profession, and not for itself alone.

FORMULA NOT ALWAYS RELIABLE—EXAMPLE.

At first it was supposed that the statements of all the legitimate manufacturing firms could be taken without question. This supposition, however, was not well founded, and it is here that some of us have been sadly disappointed. We supposed that it was only the pseudo-chemical concerns, those who are not in the legitimate manufacturing pharmaceutical business, who were the offenders, but in this we were mistaken. Even the regular manufacturing concerns have among their specialties preparations that are as fraudulent as are any put out by the typical nostrum vendors. One old established house for years has had on the market a surgical dusting powder, which it advertised as a definite synthetic chemical compound, the result of great scientific research. The published formula was worded to mystify, and extravagant claims were made for the product.

Our chemists showed that this wonderful preparation was a mixture containing approximtely 70 per cent of boric acid, 20 per cent of acetanilid, with a little thymol, bismuth, cinchonin and salol. This is by no means an isolated case, but fortunately for one's faith in business integrity there are at least some firms that do not stoop to this kind of business.

COUNCIL DOES NOT RECOMMEND USE OF ARTICLES ACCEPTED.

The acceptance of an article does not mean that the Council recommends it; this is emphasized by printing the following disclaimer with every publication of accepted articles:

* * * * *

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council.

We have been speaking of "accepting" or "approving" preparations. Accepting for what? Approving for what? Not for the advertising pages of THE JOURNAL, as some have seemed to imagine. It would be absurd to go to the trouble and expense for such a purpose. In a sense the Council is compiling a book, and acceptance of an article means that it is accepted for inclusion in this book. It will be known as "New and Non-Official Remedies," and will represent the actual, tangible evidence, or result, of the Council's work. It will contain a description of those proprietaries which have been approved, together with such non-proprietary drugs as have come into more general use and are not yet in the Pharmacopeia.

The permanent addition to our materia medica of really meritorious articles has been slow, extremely slow; but the elimination of those without merit has been still slower. And, what is of more importance, this elimination has been achieved at the loss not only of money but possibly even of human lives. The indiscriminate and unscientific drug experimentation that has been carried on by physicians at the behest of commercial interests and without any knowledge except that furnished by such interests is not creditable. It is hoped that this book will check this, to some extent at least.

BOOK WILL BE ANNUAL.

The idea is that this book will be issued as an annual, each revision to include the addition of new drugs and proprietary articles that are deemed worthy of admission; that which for good and sufficient reasons should be omitted will be left out. The descriptive matter will also be modified as may be found necessary from the developments of the year. Manufacturers are slow to call attention to untoward results. It will be the function of the revisers of this annual to incorporate both the favorable and the unfavorable.

Personally, as one who has had experience in general practice, I know that it will be of immense value. Heretofore there has been no way for the conscientious practitioner, the medical writer or the editor to differentiate the true from the false. For these the book, "New and Non-Official Remedies," will furnish a reliable guide.

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CHEMICAL LABORATORY.

A chemical laboratory has been established in the association building and is in charge of the secretary of the Council, Professor Puckner, and an assistant. While it is not possible to do a large amount of chemical work in this laboratory, it will be of great advantage in many ways.

FOREIGN COOPERATION.

Another promising feature is the fact that the Council is getting in touch with workers abroad. For instance, splendid work is being done in Berlin, especially in investigation of the synthetic chemical compounds, under the auspices of the German Apothecary Society.

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Porfessor Cushny, of the University of London, has been a corresponding member since he left this country soon after the Council was organized. It is hoped shortly to get similar foreign correspondents in Paris, Switzerland, and in other countries. Such cooperation will

be of great assistance in dealing with foreign products.

CONDITIONS ALREADY IMPROVED.

The work has been going on for a little over two years. To all appearances there are just as many nostrums on the market and the advertising pages of certain medical journals are just as well filled with this class of medicines—in fact, if the truth must be told, better, and for reasons that should be evident. But in spite of this apparent evidence of prosperity, if one looks beneath the surface, one will find that a change has taken place. There has been a gradual decrease in the number of write-ups of proprietaries; there is evidence that physicians are thinking, and they have developed a healthy skepticism and no longer believe all that is told them about the wonderful cure-alls they are asked to prescribe. The detail men do not have such willing and credulous listeners. There has been a remarkable falling off in the sale of "ethical" proprietaries, especially those of the typical nostrum type. This is common knowledge to those in touch with the trade. A comparison of the catalogues of some of the manufacturing houses in circulation two years ago with those of today will reveal the fact that not a few of the "specialties" are missing. And the descriptive matter, formulas, etc., of many others are different from what they were. A part of this is explained by the national food and drug act, but only a part. Many of the changes had taken place before this law was passed.

The influence of the Council in this connection has been greater than will ever be known. The knowledge that our profession is at last awake, that it has a body to expose the frauds that may be imposed upon physicians has aroused some of the manufacturers at least to realize that old conditions have changed. The advertising literature is scrutinized more carefully; positive cures for incurable diseases are not so common.

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HOW THE PHYSICIAN CAN HELP.

This work was inaugurated directly for the benefit of the medical profession, and indirectly for the benefit of the public. There is no question as to the final success of the propaganda, but the work will be greatly facilitated if you who are interested will:

First—If you use proprietaries, secure the list of approved preparations and all things being equal, give those in the list preference in prescribing. This list, with a description of each article, costs but a few cents; without the description it may be had for the asking.

Second—Write to those whose preparations you are using and ask if the articles have been submitted to the Council; if submitted and refused recognition, why? and if not submitted, why not? Bear this in mind: The manufacturers will recognize the Council and ask to have their controlled products placed in the book if physicians insist that they desire this; otherwise, they will do neither.

Third—Ask detail men who call if the preparations represented have been approved by the Council, and if not, tell them that until this has been done you do not care to take time to examine the product.

Fourth—Look over the advertising pages of the medical journals you are supporting—editors and publishers have great respect for the opinion of their subscribers—and write and ask for a square deal in the advertising, as well as in the reading pages.

Will it be out of place for me to suggest here that the members of the Council have a right to ask for your support when they are working absolutely without pay? Is it presumed that they will keep on indefinitely and submit to jeers and sneers if those whose interests they serve do not themselves do their share?

I am sure that every intelligent physician, unless he has some interests on the other side, believes that the movement is a good one, and

Note by the Editors—Four years have passed since the good work began. Great good has been accomplished. An immense amount of work has been done, but it is just beginning. The Southern Medical Journal is proud of the fact that it is the very first monthly medical journal to be absolutely clear of unethical advertisements.

deserves all the support the profession can give it. I am also sure that every one of you believe this. But—what are you going to do about it?

Let me repeat: Moral support alone will not win this battle.

Fifth—(By the Editors of the SOUTHERN MEDICAL JOURNAL)—We take the liberty of adding a fifth paragraph to the foregoing in the abstracts we have made from Dr. Simmon's timely oration. It is as follows:

Doctor, if you wish to help this movement along more effectually than you can in any other way, refrain from sending your articles or essays for publication to a medical journal whose advertising pages swarm with advertisements of proprietary preparations that have been analyzed by the corps of competent chemists employed by the American Medical Association and by them declared fraudulent or harmful. The journals can dispense with such advertisements better than they can dispense with your brains. Think it over, doctor. Look at the exposures in the pamphlet called the "Propaganda for Reform." This JOURNAL will supply you with a copy if you will ask for it. Compare those pilloried firms with the advertising pages in your journals and decide. We do not say this to increase the number of articles sent to us for publication. You would recognize this fact could you see the pile of manuscripts awaiting their opportunity on our editorial shelves. We think our motive is honest. We know we are sincere.

SURGERY OUTSIDE OF THE HOSPITAL, WITH REPORTS OF SOME CASES OF INTEREST.*

By J. W. ALSOBROOK,
Plant City, Fla.

In looking over the literature I find that this subject has received very little attention, and has never been discussed before this association or the American Medical Association. To me, and I believe to many of the members of this association, surgery outside the hospital means a great deal more than any other class of surgery. Many if not most of our pioneer surgeons began their work outside the hospital. Where did Marion Simms, John Wyeth and many other leading lights of our profession begin?

Look back with your mind's eye at Simms operating on the negroes of Montgomery County, Alabama, for vesico-vaginal fistula, and it will not be hard to realize the opportunities and possibilities in the rural districts of "This, our beautiful Southland," where hospitals are few and far between. There are vast areas in this country where as good and deserving men, women and children live as are found on the face of the earth.

To many of these and to all under certain conditions and circumstances, hospital treatment is simply out of the question. For instance, in acute or urgent cases of illness or injury, poverty of the family, fear of the hospital held by the laity in the country and the love of home. The delay in acute cases when transported over long distances has, as we all know, cost the lives of many patients and increased the percentage mortality of many hospitals. This is totally inexcusable in this, the age of opportunity. Right here I want to say to those, if there be such among you, who write instructive and scientific articles for our leading journals and wind up by saying "that only a skilled operator should undertake this or that operation, and then only in a well equipped hospital," *don't* try to

*Read before the Section on Surgery of the Southern Medical Association, Nashville, Tenn., Nov. 8-10, 1911.

frighten your younger brother, who is just as well educated under the present advanced system of teaching in our best medical schools as you were when you started out to become a surgeon. How can one become skilled unless he does the operation himself? The younger men of today can be, and should be, trained, in well equipped schools and hospitals, and with the advantages afforded by post graduate schools, with which this country abounds. There is no excuse why any man with surgical ability cannot and should not operate on his acute cases at home, rather than risk their lives by the delay and the dangers of a railroad journey in sending them to the hospital. If he does not operate himself, the time has come with improved highways and the use of the automobile when he can get a surgeon to his patient with less delay and without the danger of a journey who has been able to work out a technique which will give equal, if not better, results in surgery outside the hospital than in our average institutions. There can now be found a surgeon in almost every radius of reachable distance armed with modern equipment and prepared to do surgery anywhere. The home is free from the dangers of ward infections and mixed infections of various kinds, and again in the well appointed home there are many comforts unknown to hospital management. One nurse gives her whole time to one patient, and can prepare the necessary nourishment unless contraindicted. David L. Edsall (1) tells us, in an article on "Medical Hygiene of the Ward," that not long ago one of the largest hospitals of Philadelphia had a nurse whose duties were both to disinfect bed clothing and execreta from the medical ward and to prepare the liquid nourishment for ward patients. You will find men throughout the country who are capable of taking care of the patient and carrying out the after treatment in almost any case, who do not care to do surgery.

These men will call their neighbor who is doing successful surgery in the home, much sooner than they will make up their minds to send their patient away to a distant hospital. They will have the advantage of consultation at home, and if an operation is or is not necessary they are placed in a better position with the family. When they know that if the patient is operated upon they can continue in the case and earn a decent fee by attending to the after treatment, and further gain the good will of the patient and family. This will tend to increase the efficiency of all progressive physicians, old and young, and will redound to the good of humanity, and will eliminate the atrocious practice of those surgeons who offer commissions or "split fees" for patients sent them.

There is a large class of acute cases which demand operation without being moved any great distance, and better not to move them at all. The most important of these are fulminating types of appendicitis, gun-shot wounds of the abdomen, suppurative conditions in the female pelvis, intusssusception, obstetric operations, including Caesarean section and many others that are life saving if done without delay, but often prove fatal if help is too far away. "The poor we have with us always;" poverty keeps many from seeking hospital treatment, in the sections far removed from cities and hospitals, but this class, if handled judiciously, is the greatest blessing to the young man who has aspirations, for they constitute a large percentage of his first cases, and if he gives them good and faithful service they will become an asset in the way of experience in the future and will repay him many times over for the money and effort bestowed upon them. Do not send them to some distant hospital or clinic as charity patients, and let the community pay their railroad fare and thus convince them that they are paupers, but take the burden that belongs to you and convert it into a blessing.

The situation is well expressed by the following: "The contrast in attitude of mind of country and city patients toward medical

fee service is striking in the extreme. There are "dead beats" everywhere, but the farmer and farm laborer expect to pay for medical services as for commodities. The people in large cities are debauched by medical charity, and the profession is throttling itself. About every other sick person in New York is treated free, not to mention the host of suburbanites who are willing to lie as to their residence to get free and specialist's treatment. At the low rate of one dollar a visit, the doctors of New York are contributing seven million five hundred thousand dollars worth of services annually free, a sum equal per capita to their average income. Most of the abuse of medical charity is due to the relations to doctorial and institutional prestige, abundant material, good clinical teaching and stronger appeal for endowment because of the 'heavy demands of the poor for medical aid,' a jumble of cause and effect that would be amusing if not so sophistical." The foregoing is from the pen of one who has had opportunity for wide observation and experience among charity patients, having been a professor in the New York Polyclinic.

Fear of the hospital will seem strange to many of you, but there are thousands of people living throughout the country who consider death and the hospital one and the same, and never think or speak of a hospital without at the same time contemplating their last estate. This, I grant you, is groundless, but they remember some friend "who went to the hospital and died," or some friend has told them that "all the doctors in the hospital want is to cut you up." The majority of our country people who are not poor and who are not afraid of the hospital prefer to be operated upon at home by a surgeon whom they know personally. They believe "he will take more interest in their case than a stranger." The love of home is a strong factor.

And now that "back to the farm" is the slogan there is going to be more for the country surgeon to do than before. The man who does surgery outside the hospital must be resourceful in the extreme. He must be able to convert the most lowly places into practically aseptic operating rooms and be able to sterilize his instruments and dressings in anything from an old fashioned oven to the most modern sterilizer, and use anything from a pile of fence rails to his best office operating table. The essential thing in it all is to be absolutely thorough, and we can be just as thorough in our technique outside the hospital as within. It will require more work, tact, and even hardships, though, on the part of the surgeon and his trained assistants. The average well trained nurse has to be retrained when she goes into country work.

With one assistant, and one well trained country nurse and the family physician to give the anesthetic, almost any operation can be done when necessity demands. With a few blocks of wood to raise the head of the bed, putting the patient in Fowler's position, and a fountain syringe to administer protoclysis in acute suppurative conditions of the abdomen, will save many lives. Of twelve cases of diffuse peritonitis accompanying appendicitis operated upon during the past five years, only one has died; he died of suppurative cholangitis. This case will be described in detail under report of cases. These patients were all placed in Fowler's position and turned on their right side with drainage and counter-drainage in most cases.

Five of them received protoclysis from twelve to thirty-six hours after operation; the others were given normal saline solution as enemas to quiet thirst; this was before we knew about protoclysis. Of sixty-five laparotomies, done for various causes during the same period, and including the foregoing cases we have had only three deaths, two of which will be described in detail under case reports. The other was due to the accidental breaking down of an abscess wall in a case of appendicitis at the second dressing, and the spread of infection unawares. We do not do all or even a greater part of our operations in the home and hovel, but most

patients are brought to our offices, which are equipped with the modern conveniences of the ordinary hospital. Not with tile floors, and steam heat, and pressure sterilizers and with countless numbers of instruments, but with everything to insure aseptic surgery. I maintain some bedrooms in connection with my office, where patients may stay and have the care of a trained nurse following operation. Some of my colleagues do likewise.

We never get too busy or too tired to help the other fellow when he has an operation; each is the other's personal friend and his trusted assistant and confidant. We have truly a medical fraternity in the little country town.

REPORT OF CASES.

Case No. 1—Caesarean operation, twenty-seven miles in the country. L. D., colored, age 34, dwarf and "hunch-back," only three feet high. Labor came on Oct. 30, 1907, at full term; pains very severe from the start. On Nov. 2 at 2 p. m. I was called in consultation with instructions to bring the necessary instruments to do a Caesarean operation. The patient lived at a turpentine still, twenty-seven miles in the country. At 2:30 p. m. I was on my way, accompanied by Dr. Young, who was to be my only assistant. We arrived some six hours later after having been lost for two hours on the way. After an examination we readily agreed with Dr. McMurray that an operation was necessary. The antero-posterior diameter would not admit the index finger in the center. The child was already dead and the mother had a temperature of 102.5 F.

She had been attended for the first two days by the dirtiest of mid-wives. We prepared for an operation as rapidly as circumstances would permit, having only one small lamp and several torches to work by. We began the operation at 11 o'clock p. m. under chloroform. A median incision was made, which came near going through the uterine wall, the parietes being very thin, and this being my first operation of the kind; but the necessities were great. And I had learned my lesson from one among you who has taught many boys "to fear nothing surgical," when faced by similar circumstances. Believing the child to be dead, and knowing something of the amount of infection present, and wishing to make the woman forever sterile, we decided to do a supra-vaginal hysterectomy in connection with the Caesarean operation. We first ligated the uterine and ovarian arteries and then incised and emptied the uterus, all of which required only about five minutes. The child was a well formed female, but had been dead for several days. We rapidly finished our supra-vaginal hysterectomy, losing not more than a tablespoonful of blood during the whole operation, which was completed in forty minutes. The patient was put to bed in better condition than when the operation was begun and left in the care of Dr. McMurray, who agreed to stay until noon the following day, at which time he left her in splendid condition. About 1:30 p. m. her pastor called, strictly against orders, "to pray over her." The patient being an ultra-religious person was wrought upon as only a negro can be, and immediately shouted herself into glory. She evidently died from hemorrhage, one of the ligatures having slipped. I have always doubted the advisability of the hysterectomy in this case.

Case No. 2, Caesarean Operation in a Negro House—K. S., negro, age 38, mother of thirteen children. The last seven have been born dead after days of labor, and version or forceps in four. I delivered her of a dead child by version one year preceding the present confinement. The cause of her difficult labors was an extremely pendulous abdomen, with great increase in flesh since the birth of her sixth child. Weight, 350 pounds at time of operation. I was called at the beginning of labor Feb. 15, 1909, and at once advised an operation, knowing of her previous trouble. She readily agreed after I had promised her a living child. She was operated on two

hours later in her home, the operation requiring about thirty minutes.

The child was delivered in two minutes and breathed without any trouble. Weight, eleven pounds. The uterus was closed with two tiers of catgut. The child was strong and normal from beginning and did well. The mother was up in two weeks. One of her daughters did the nursing of both mother and child.

Case No. 3, Gun-shot Wound of the Abdomen—H. B., colored, male, age 24, robust and healthy. I was called to see him in consultation with Dr. Knight, at his office, Sept. 12, 1905, at 8:30 p. m. On examination we found he had been shot one inch below and one-half inch to the left of umbilicus. It was plainly a penetrating wound, as the omentum could be seen plugging the wound. After a hurried preparation we opened the abdomen through the wound of entrance and repaired perforations as we came to them, closing each with a purse-string of fine silk, there being fourteen in number.

We took this negro back to his shanty, and without a nurse other than a negro man to give him water and a little soup the neighbors brought in, he made a rapid recovery and was out in two weeks.

Case No. 4, Gun-shot Wound of the Abdomen—Jas. H., mulatto, age 17, was brought to my office Jan. 9, 1908, after having been shot two hours and having ridden ten miles. I was ready to operate on another case. Instead I operated upon him almost immediately, not having to wait to prepare, as is usual in general practice. On examination I found he had been shot one inch below and one inch to the left of the umbilicus, with a 22-caliber rifle. The ball could be felt beneath the skin of the buttock. Incision through the wound of entrance. Perforations cleansed and closed as found, numbering eleven for the small intestine and one for the descending colon. He was placed in a negro boarding house and nursed by his mother.

He made an uneventful recovery and rode ten miles in a wagon on the tenth day.

Case No. 5, Gun-shot Wound of the Liver—T. B., colored, male, age 40. I was called to see him at 8 o'clock p. m. Oct. 24, 1909. On examination I found he had been shot with a 38 Colt revolver, the bullet entering the abdomen just to the right of the ensiform cartilage and slightly below, coming out just below the twelfth rib behind. He had a good pulse and showed very little shock, but he had the general appearance of a very badly injured man. We decided to operate at once, and while he was being hauled to my office, which was only a mile, we made the usual preparations. We opened the abdomen through the wound of entrance and found it entirely filled with blood, which came from a large ragged wound in the right lobe of the liver. We placed by feeling two deep sutures of chromic catgut as quickly and tied as lightly as possible to control the hemorrhage, after which we made a counter-opening through the wound of exit and packed with gauze, both anteriorly and posteriorly, closing the wounds partially with through and through silk worm gut sutures. He was carried back to his home in the wagon the following morning, making a good recovery in two weeks. His wife was his nurse.

Case No. 6, Diffuse Suppurative Peritonitis—C. S., white, male, age 18. First called to see him at midnight Dec. 14, 1908. He had been suffering twenty-four hours with appendicitis and had taken four compound cathartic pills, but had gotten no results. Temperature 101, pulse 100. I gave him a hypodermic of morphine and ordered him given two tablespoonfuls of epsom salts and told him that if he was not better by morning he would have to be operated upon. His bowels moved several times during the night, but he was no better in the morning. He was brought to my office, a distance of three miles, and was operated on at 10 o'clock a. m. We found a ruptured appendix free from any adhesions and a diffused peritonitis, due most likely to

my salts and his CC pills. The appendix was removed and a rubber tube drainage put in, and the wound partially closed. He was put to bed on his right side, in exaggerated Fowler's position, and protoclysis begun at once, which was kept up at intervals of two hours for thirty-six hours. He made a rapid and uneventful recovery. The office nurse had charge of this case.

Case No. 7, Cholangitis Following Appendicitis—J. L. Y., white, male, age 29. First saw him late in the evening of Oct. 9, 1908. He had been ill twelve hours with acute appendicitis, this being his first attack. I advised an operation the following morning and we operated on him at his home at 8:30 a. m., finding a gangrenous, ruptured appendix, unprotected by adhesions. When the abdomen was opened there was a free flow of greenish, foul-smelling fluid. We turned him on his right side to allow as much as would to run out. We then removed the appendix, putting in drainage, partially closing the wound. He was put to bed on his right side in Fowler's position.

He did very well for a few days, when he had a chill. Blood examination showed malarial parasites, which was confirmed by Dr. Young. We gave him quinine and urea hypodermically, which controlled the chills, and on Oct. 20 the temperature was normal. The wound drained very well, but did not look healthy. Two days later he had another chill, and complained of pain in the right shoulder, suffering very much from a severe hiccough, which was persistent and uncontrollable. We kept up our quinine, but it did no good. The chills were repeated and he showed some jaundice on Oct. 25, which rapidly increased until he was a lemon yellow. On November 4th we opened the abdomen over the gall bladder. We found it markedly distended and when drained the bile stained pus was followed by a thick brown pus which drained freely for two days, when it suddenly stopped and the patient died twenty-four hours later. A hurried post-mortem was held and we found on incising the liver that the bile ducts throughout the organ were completely filled with pus. The blood vessels not being involved, we classed this as a case of cholangitis.

Case No. 8, Cholangitis Following Grippe—W. B., white, male, age 48. First seen Feb. 28, 1908. Diagnosis grippe, which ran a course of about ten days. Just as he seemed to be convalescent he developed a severe chill, followed by a severe hiccough, which persisted until the day he was operated upon, March 16. The chills were irregular, but the gall bladder could be plainly felt and was tender. There was slight jaundice. When he finally consented to an operation he was so weak and emaciated that we opened the abdomen under cocaine, being afraid to give him an anesthetic. We used 1 to 500 cocaine solutions, in filtration method, and had no difficulty in finishing the operation. We found a gall bladder very much distended and when open contained bile stained pus, which was followed by yellow pus in large quantities for several days, draining from one to four quarts in twenty-four hours. The bile gradually returned and was normal in color in ten days. The temperature was normal by the end of the first week. The hiccough was relieved as soon as the gall bladder was drained. The patient was able to sit up in three weeks, but the incision healed slowly and continued to drain for some months, but finally healed.

I wish to take this opportunity to thank those physicians who have so kindly helped me in my efforts to do successful surgery under difficulties. I wish especially to thank Drs. Knight and Young for many kindnesses shown me.

LITERATURE.

1. Am. Jour. Med. Science, Vol. CXV., No. 4.
2. Am. Jour. Surgery, Vol. XXIV., No. 5.

DISCUSSION.

Dr. Jere L. Crook, Jackson, Tenn.—"This is in many respects a most remarkable and interesting paper. It should prove an incentive to every young man to do the best he can under adverse conditions. Even though we look with pride upon McDowell, Sims and other distinguished men who were raised in the country, there is no reason why we may not expect that the future holds other McDowells and

Sims in store for us. This young practitioner's results are very remarkable indeed, considering the operations were done under such difficulties, and his work deserves our commendation. He has done successful surgery under conditions which would seem to some of us to be appalling. I do not agree with the author of the paper regarding hospitals. While he has done operations outside of hospitals and has been successful in obtaining satisfactory results, I think the chances of patients are much better where they can be taken to a hospital and be operated upon there. A hospital is more convenient, and I think our statistics will show that the chances of these patients are better where they can be taken to a modern hospital and operated upon. But when we consider the point that was made by the essayist that he could not get some of these patients to a hospital; that he had to operate in a turpentine camp; his results are remarkable indeed."

Dr. John A. Gaines, Nashville.—"I congratulate the author of this paper on his beautiful results. I agree also with the previous speaker, Dr. Crook, in regard to hospitals, and I may be a little enthusiastic about them, but if possible I always like to have patients I am to operate upon taken to a hospital, as I think it adds very much to the prognosis in all cases of major surgery; yet we all know surgeons in the city have many calls to the country and have practically to undergo the same ordeal, but usually, however, with certain modifications. Personally, I always have the sterilizing done at the hospital before I start. I go equipped with sheets to make the immediate surroundings sterile. I must say that my results from operating in country practice have been good. It is hard work; it has increased responsibilities, and I always feel it is much safer to have the patient in a hospital. The essayist is to be congratulated on the report of these cases, and on the result he has obtained. I certainly feel very grateful and proud of some of his work, and if I can get such results even in a splendidly equipped hospital, with favorable surroundings, conducing to proper results, I should be satisfied. At the same time, under ordinary circumstances, I would prefer to have my patients taken to a hospital to be operated on."

Dr. Alsobrook (closing the discussion)—"I do not discourage carrying patients to a hospital except where the danger is greater than if they were kept at home. Every young man who does country work ought to be equipped under the present methods of teaching and the present hospital advantages to do operative surgery. He should be capable of and competent to do this work, and if the necessity arises he ought to be able to take care of his own patients rather than refer them to others. There is no excuse for the young practitioners with the teaching of to-day not being able to do this work."

REPORT OF SURGICAL CASES

By R. R. KIME,
Gynecologist and Abdominal Surgeon to Tabernacle Infirmary.
Atlanta, Ga.

Case 1—Chylous Cyst of Mesentery of Ileum with Appendicitis.

Case 2—Extensive Abscess of Abdominal Wall with Complications.

Case 3—Cholecystectomy with Complications.

Case 4—Large Multilocular Cyst with Complications.

REPORT.

CASE 1—Mr. C. D. M., age 28 years, married. Previous health good. Worked in express office lifting heavy packages. No previous history of lymphatic disease.

History—Some four weeks previous had some pain and tenderness in right iliac region, disturbance of digestion, torpidity in action of bowels, but continued to work for two weeks, then quit with a hope of getting better.

Pain, tenderness and enlargement in right side increased, accompanied with elevation of pulse and temperature. On investigation it was decided that operation was indicated and case was referred to me by Dr. J. J. Foster. Patient came to my office with Dr. Foster for examination, with elevation of pulse and temperature, pain, tenderness and enlargement in right iliac region, the pain and tenderness over region of appendix, but the character and location of swelling led me to believe we had an abscess involving right rectus muscle, possibly resulting from appendicitis. Advised operative measures. Patient went immediately to the Tabernacle Infirm-

*Read before Fulton Co., Ga., Medical Society, January, 1911.

ary and operation was performed the next day. Urine examined.

Incision made at border of right rectus muscle, wall thickened, congested, bled freely, no pus, entered abdominal cavity and found tumor beneath muscle in mesentery of ileum, tip of appendix adherent to tumor, both inflamed; separated and removed appendix, cyst wall so thin and adherent to posterior wall of abdominal cavity that decided removal was not safe.

Opened and drained cyst of one pint or more of good rich yellow chyle, sponged out cavity, which bled so freely had to use gauze pack to stop bleeding; stitched sack wall to parietal peritoneum and closed abdomen.

I left city two days later for Chicago and Rochester on my summer vacation and Dr. E. C. Davis attended the case during my absence. Gauze was removed on the ninth day, cyst cavity gradually filled up and patient made uneventful recovery. Speciment of fluid from cyst was examined by Dr. E. C. Trash and pronounced pure chyle.

Remarks—I find but little written on the subject of chylous cysts of the mesentery. Most writers simply mention that such conditions may occur. Lexner (Bevan's Surgery, page 995) states: "Nothing definite is known concerning the developmental history of the large chylous cysts which are occasionally found in the mesentery." It is not a process of degeneration, but one of extravasation.

We have tumors or enlargements of various parts of the body due to extravasation from obstruction, blocking, or rupture of the lymph channels and designated by names indicating location and method of extravasation. One of the chief causes is filaria, especially in tropical countries, producing a condition known as filariasis, often accompanied by chyclous urine.

Case 2—A. B., girl, age 7 years.

History—Taken with convulsions due to intestinal toxaemia April 3, 1909. Had three convulsions, high temperature and pulse with severe constitutional disturbance, which under treatment by Dr. W. N. Brawner subsided in a few days, which was then followed by lobar pneumonia, with complete consolidation, and ran the usual course. Following pneumonia typhoid fever developed, which cleared up in about two months. Patient convalescing, clear of fever, up and about for two weeks, when suddenly she was seized with pain in the abdomen. Collapse with severe constitutional symptoms, abdomen distended, tense, tender, followed by elevation of pulse and temperature, with symptoms of peritonitis. Desperately ill for two or three weeks, then localized, abscess formed and discharged at umbilicus, which continued to discharge pus and occasionally fecal matter until I first saw patient.

The little patient was now a mere skeleton, so weak and anaemic that we feared she could not stand an anaesthetic or operative shock, but decided that she would die unless something was done for relief.

Patient was anaesthetized July 28, 1910, and as hurriedly as possible opening at umbilicus was enlarged to admit finger to find direction of channel. A large metal catheter was introduced down into the ilea-caecal region, a counter opening made, fecal matter discharged, a good sized rubber tube carried through and left protruding at each opening. Patient rallied and improved for two weeks, when the tube could not be replaced after cleansing and patient then became worse.

I was called again by Dr. Brawner and we decided to anaesthetize patient and secure better drainage with a hope of getting sufficient improvement for a more radical operation later.

Under anaesthesia, as rapidly as possible, we enlarged opening in right inguinal region sufficient to explore with finger. Found the fecal fistulous tract close to opening, also that whole abdominal wall had been separated from parietal peritoneum by burrowing of abscess. All except a space two inches in diameter at left of umbilicus in which was a small abscess which we opened with finger.

A large metal female catheter was carried up to liver on right side, over to region of spleen on left side, also down low in left inguinal region from original opening in right inguinal region, counter opening being made at splenic and left inguinal regions. Large soft rubber drainage tubes were carried from opening in right side to both upper and lower openings in left side; also extra tube from upper to lower opening in left side. Believing this was all the shock the patient was able to stand, no search was made for other fecal fistulae.

Patient rallied well from operation and soon began to improve. Pus and fecal discharge gradually lessened after the first week, and later it was noticed there was also some fecal discharge from vagina. At present there is very little fecal discharge, but it is aggravated and slightly increased by coughing, due to an attack of la grippe, which occurred about the middle of December, 1910, and followed by broncho-pneumonia, from which the patient seems to be gradually recovering.

Remarks—At no time have tubercle bacilli been found. Colon bacilli were plentiful. This case is reported because of the extensive abscess of the abdominal wall, the various severe complications and as an illustration of the wonderful vitality and resisting power of some patients.

Case 3—Mrs. B., age 38 years, widow, mother of four children.

History—Mrs. B. was operated on by the writer Nov. 23, 1907, for tubercular appendicitis, husband having died of tuberculosis about two years previously. At that time there were extensive adhesions. I removed part of omentum, separated ileum from tubercular mass, cleansing intestine with dioxogen; applied pure carbolic acid, then neutralized with alcohol and closed over surface with sutures. The tubercular mass of appendix was curetted from caecum, swabbed with dioxogen followed with pure carbolic acid, then alcohol, and covered over with stitches and abdomen closed without drainage. Patient made uneventful recovery, gained rapidly in flesh and strength, and seemed to be completely restored to health. The diagnosis of tubercular appendicitis was confirmed by microscopic examination of tissue removed.

I was called Nov. 18, 1910, three years after previous operation, and found patient suffering from pain in region of gall bladder, some tenderness, elevation of pulse and temperature, no marked jaundice, slight distension of abdomen, fullness, induration and enlargement in region of gall bladder, with indistinct outlines. Gave history of repeated attacks of pain in that region during last eighteen months or two years, with indigestion, constipation, loss of flesh and strength. Nov. 26 temperature reached 105 degrees F. Under medium doses of urotropin, salol, diuretics, calomel and phosphate of soda with large doses of quinine once daily in rectum, temperature rapidly subsided to nearly normal. Operated at Tabernacle Infirmary, Dec. 2.

Incision near border of right rectus muscle. Found transverse colon adherent to liver over gall bladder, covered in with extensive adhesions. At first thought it would be impossible to operate, but after separating adhesions found a line of cleavage between gall bladder and colon. It required considerable force to push the intestine loose from gall bladder with gauze until we could reach cystic duct. Gall bladder being so indurated, thickened and diseased, decided to remove it. Clamped cystic duct and dissected up gall bladder from below about half distance, then tore into gall bladder, removed sixty gall stones from lower portion and cystic duct. Adhesions and inflammatory deposits so dense and firm that we could not proceed farther from below, so we hurriedly cut gall bladder loose from liver from above and stitched wound in liver to check bleeding. No bile found in gall bladder, cystic duct occluded. Tied it off, placed drainage and closed abdomen with layer of catgut suture.

Some little discharge of bile for ten days. Incision now healed, patient improving rapid-

ly, appetite and digestion good, pulse and temperature soon reached normal and remained so.

Patient requested not to know if any malignant or tubercular condition eixsted, so microscopical examination of diseased tissue has not been made. You can see from the specimen the thickened, diseased wall, and evidences of extensive adhesions.

Remarks—I recognize that it is not best to remove gall bladder when it can be avoided. It is a safety valve, preventing pancreatic disease. In this case it was so diseased, duct occluded, walls thickened, that it was a menace to patient, and her previous history made me apprehensive.

Case 4—Mrs. L., age 29 years. Married eleven years and had never been pregnant. Flows regular until present condition. Last flow occurred March, 1910, and considering herself pregnant she engaged the services of a leading surgeon of the city so as to get special attention and care during pregnancy and confinement. At the expected time for labor the engaged surgeon was out of the city on vacation. Dr. Kelly and I were called Jan. 2, 1911, to see her, and recognizing at once the serious condition of the patient, had her removed to the Tabernacle Infirmary.

Pulse ranged from 110 to 130 and temperature 99 to 102 degrees F. There was immense distension of abdomen, very difficult breathing and severe constitutional disturbance. Three or four distinct cysts were outlined, indurated masses could be felt, uterus could not be outlined on account of distension and pressure. As soon as elimination could be established and patient prepared operation was performed, Jan. 8, 1911.

Ether anaesthesia, incision in median line, at first large enough to admit hand for exploration, later had to be extended from near pubes almost to easiform cartilege to facilitate breaking up adhesions and removal of tumor. There was over one gallon of free fluid in abdominal cavity. The omentum was adherent to parietal peritoneum at pubic arch, also to bladder, and being fixed the nodules of the cyst by pressure had riddled it so that it had to be tied off in bands at different points; the tumor was universally adherent to parietal peritoneum, intestines, stomach, etc., adhesions of recent origin, and easily separated with hand, but was accompanied by free bleeding. Very broad pedicle with a nodule of tumor running down in base of broad ligament which could not be closed up, bled freely and had to be packed with gauze, the part exposed to intestines covered with rubber tissue, pedicle tied off in sections. Serous coat of intestines universally eroded, raw, with extensive adhesions, flakes of plastic lymph, also bands of adhesions. Where adhesions were separated had free capillary bleeding, even from wall of stomach. Additional drain of split soft rubber tube, covered with rubber tissue, was placed in Douglas pouch and incision closed. Patient placed in Fowler's position and protoclysis used.

As you will see from specimen it was a multilocular cyst, originating in right ovary. Cyst and fluid weighed approximately forty or fifty pounds. The patient had lost about thirty pounds in weight and now weighed about 100 pounds. The hard substances felt before operation were the thickened, indurated bands uniting the cysts, being on tension and the lobules separated by the free fluid in the abdomen. The patient has recovered and gained twenty pounds in weight.

Remarks—This case illustrates the necessity of a careful examination of patient by physician when engaged to attend a primapara, and especially when patient has been married several years without becoming pregnant. In early months this operation would have been comparatively safe, but in the condition in which we found her it was extremely hazardous even to give an anaesthetic.

MY RESULTS WITH GONOCOCCIC VACCINE.*

By GEO. R. LIVERMORE, M.D.,
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Memphis, Tenn.

Doctors are ever on the alert for something that will effect a cure more easily and more quickly than the remedies that are already in use, consequently each new preparation, whose merit is considered worthy, is eagerly seized upon by the profession, and when a few successes have been achieved, it is immediately proclaimed a panacea for all ills and used, not only for diseases for which it is recommended, but often for every known illness, till, finding it useless in many conditions, it is condemned and pronounced worthless in all. In other instances the good results obtained in certain selected cases so enthuse the observers that they become overenthusiastic in their estimate of its value, and misleading reports are sent broadcast throughout the land. Especially is the latter exemplified in gonococcic vaccine therapy, and to my mind it is clearly a question of the pendulum of professional approbation having swung too far.

I have seen report after report from the pen of well known men heralding their successes with gonococcic vaccine in almost every variety of neisserian infection, and yet those who are constantly treating this class of cases, not only with gonococcic vaccine, but with every other known remedy, are only too cognizant of the absurdity of these claims. My experience with neisserian vaccine therapy has convinced me that there is an element or elements in it that we do not understand and until this unknown factor is eliminated we will meet with only meager success in this new field that Sir A. E. Wright has opened for us.

As far as a case of either acute or chronic anterior or post gonorrhea is concerned, my experience has convinced me that gonococcic vaccine, as a cure, is *absolutely worthless.* Parke, Davis & Co. and Mulford & Co. both sent me large quantities of the vaccine for experimental purposes. I used it in all doses and at varying intervals, and in no case did I effect a cure or see other than a modicum of improvement. This statement coincides with statements of prominent genito-urinary men in New York who have also experimented extensively with gonococcic vaccine. On the other hand, some of the complications of both acute and chronic gonorrhea sometimes yield promptly and satisfactorily to the administration of the vaccine, and the object of this paper is to point out just where results may be expected, and in the discussion that may be evoked to hope that something may be elicited that will assist us in finding the unknown element that now marks the difference between a favorable and an unfavorable result.

Given two cases of gonorrheal epididymo-orchitis apparently in all respects similar, give to each the same quantity of gonococcic vaccine, and in one case there will be marked improvement and quick subsidence of all symptoms, unaided by other means, while the other may pursue a violent and exceedingly painful course, despite other remedies, such as hot or cold applications, icthyol or guaiacol ointment, strapping, etc., used in conjunction with the vaccine. Why this is true will never be known till vaccine therapy is thoroughly understood, and then, and not till then, will uniform and satisfactory results be obtained with this method of treatment. The complications in which the vaccine have given the best results in my hands are: Epididymo-orchitis, arthritis and prostatitis.

As to the dosage: In epididymo-orchitis

*Read before the Section on Surgery of the Southern Medical Association, Nashville, Tenn., November 8-11, 1910.

and prostatitis, I usually give about 25,000,000 the first injection and increase the dose 25,000,000 to 50,000,000 at each subsequent injection. The interval, between injections, should not be less than four days, as I have often noted quite a pronounced increase in the pain in epididymo-orchitis and arthritis when the injections were given oftener than every four days. The site of the injection is immaterial and I have never seen any untoward results following the use of gonococcic vaccine, even when given in very large doses, other than a slight redness about the region where the injection was given. In arthritis I usually begin with 50,000,000 and increase the dosage 50,000,000 each time till results are obtained. It is indeed gratifying to have this distressing condition respond nicely to this form of treatment.

Another point I desire to bring to your notice as being worthy of consideration, that I have observed and also seen reported by some genito-urinary man, I think Dr. Aromstam, is its value in determining when a given case of gonorrhea is cured. Often it is true that in chronic posterior gonorrhea we can continually find large amounts of pus in the prostatic secretion, long after we have failed to find any gonococci. Frequently in these cases if an injection of 25,000,000 dead gonococci is given, gonococci can be found in the prostatic gland. Failure to find the gonococci after giving the vaccine in these cases is strong presumptive evidence that the case is cured.

In the treatment of gonorrhea in women, I have several times noted cases that seemed to be benefited by the use of the vaccine. Whether this improvement was a coincidence or not, I am unable to say, as other means of treatment were used at the same time, and I do not believe the question will be settled till vaccine therapy is placed on a more rational basis.

I may also state that the administration of gonococcic vaccine is not a prophylactic against the occurrence of complications as I have often seen them develop after the vaccine had been used.

The superiority of anti-gonococcic serum over gonococcic vaccine is a mooted question, but in my hands neither has the advantage. In some cases the vaccine seems to give better results, while in others the serum. If I fail to see any improvement after the administration of the vaccine, I resort to the serum, and vice versa, and in this way have often obtained results that the vaccine, or serum alone, would not give.

This paper is not intended to dampen your ardor in regard to the value of gonococcic vaccine, but, on the contrary, I hope it will prove the means of stimulating further experiments, for only in the careful and unlimited study of the administration of gonococcic vaccine, can we hope to solve the unknown factors that prevent it from being to gonorrhea what diphtheria antitoxin is to diphtheria.

REPORT OF FIVE HUNDRED CASES OF GONORRHEAL INFECTION, TREATED WITH GONOCOCCIC VACCINE.*

By COURTNEY W. SHROPSHIRE, M.D.,
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Birmingham, Ala.

Since the announcement by Wright, in his visit to the United States in 1907, of his vaccine therapy hundreds of men all over the country have attempted to follow his technique in treating bacterial diseases with the hope of securing results as brilliant as his own. Very few variations in the technique have been introduced. This method of treatment has its ardent advocates. Not a few skeptics have scoffed at it from the beginning, and I venture to say a large number of them are using and advocating its use now.

So long as it was deemed necessary to administer the treatment by opsonic index the average general practitioner could not utilize the method. Recently a great deal of vaccine therapy has been employed by many workers who have relied wholly on clinical symptoms as the guide to the size and frequency of the dose.

The results have been almost uniformly satisfactory. This has resulted in quickening the interest of the general practitioner.

Many of these gentlemen who formerly looked upon this method of treatment as ultra-scientific are now asking, what is the field for vaccine therapy and of what value is it? Current medical literature does not answer these questions very satisfactorily. A large majority of the writers are enthusiastic and report most brilliant results. It is also true that a large number of these enthusiastic writers have worked up their enthusiasm over a very few cases—often ten or twenty and these treated by well established routine methods in addition to the vaccines.

Some workers have reported brilliant results in some series of particular infections, as in acute gonorrhea or gonorrheal rheumatism; while others have been unable to secure any favorable results in these particular infections. From the vast amount of literature that I have at my command no definite data can be secured.

It is almost time for the reaction from the enthusiasm which has been displayed in this work to set in. Undoubtedly the pendulum will swing back too far, and condemnation will be piled up where it is not deserved. It will then remain for the few conservative workers who are convinced of its value as a method of treatment to put it on a sound and sane basis. The wide advertising of the wonderful curative properties of vaccines by drug houses will doubtless be the very means of discrediting this method of treatment.

According to the investigations by Wright and Douglas, there are certain substances in the blood serum and blood plasma which in some way act upon or prepare the bacteria so that phagocytosis may more readily take place. These substances have their origin from the leukocytes and are variously known as alexins, anti-bodies, receptors and opsonins. They pass about freely in the blood stream and their general work during health is the preparation of the food particles for proper ingestion, and the disintegration of any particles of foreign substance for the leukocytes. It is maintained that the opsonins act upon bacteria, infecting the body, in same way that they act upon other foreign substances, viz: they prepare them for the reception of the leukocytes. Stimulation of the leukocytes by the introduction of a specific bacterial prod-

*Read before the Section on Surgery of the Southern Medical Association, Nashville, Tenn., November 8-11, 1910.

uct in the circulation is believed to create the development of a greater number of opsonins, which upon leaving the leukocytes and entering the blood stream, manifest only a choice for the bacteria, that correspond to those from which the bacterial product is made. The bacterial product which is introduced in the blood to produce a selective action on the opsonins (which are found to be greatly on the increase during the invasion of an infection) may be one of the various preparations containing the specific type of organism causing the infection, such as antitoxin, vaccines, serums or the bacterins. The virulence of the germs or their toxins, in any of these products, is of course destroyed in their preparation.

Upon injecting any of the preparations into the circulation it is found that the selective action of the opsonins for the specific organism, causing the leison of disease, is decidedly increased. Before instituting bacterial therapy it is necessary to ascertain the type of the infection causing the disease. Quoting from Dr. A. J. Burke's recent excellent paper, "Observations Made in the Use of Bacterins with the Regular Treatment for Neisser's Infection": Often the symptomatology is sufficient to cap the diagnosis, but the more positive means of ascertaining the type of infecting organism is the use of the microscope."

When the opsonic index is raised, that is, when there is an increased digestive action for infecting organisms manifested by the leukocytes, as should be the case during an infection, the selective action in the opsonins is decidedly increased by the introduction of the bacterins or vaccines in the circulation.

If the opsonins are to exert a selective action upon an infection, so that the germs shall be properly prepared for digestion or disintegration by the leukocytes, the bacterins or vaccines must be of the type that corresponds to the infection.

The bacterins or vaccines may be introduced in the course of treatment of gonorrhea, whether of the acute or chronic type be it a specific or mixed infection. It matters little what the duration, the intensity, or the complications of a gonorrhea may be, so far as the introduction of the bacterial therapy goes, the bacterins or vaccines may be used at any time, during any stage, or with any of the complications resulting from the infection.

No undesirable intensification of symptoms or complications need be expected from their use and aside from the symptoms at the site of the injections, viz: pain, swelling, fever and discoloration, with the general elevation of body temperature by a degree or two above normal, a general uneasiness, malaise and occasionally a dull headache of short duration, there will be no alarming conditions. It is true that there is an increased discharge from the urethra, in most cases for the first few treatments with the vaccines; but this should not be a discouraging sign.

If we make a microscopical examination of the urethral discharge, we are shown that there is a decided leukocytosis, ocurrring in the pus. Upon making a closer examination of a field of pus, from the urethra, several days after treatment with the vaccines, there will be found a greater abundance of bacteria in the leukocytes and the organism which are free in the pus, showing the tendency to massing, i. e., they clump or come together around the leukocytes. The local symptoms last usually for several days, but they never require attention, provided the bacterial treatments were given with the proper precautions.

The constitutional symptoms usually appear between the first, fourth or fifth treatments with the vaccines, but they are of short duration, rarely lasting more than twenty-four hours.

Observation with the vaccines for treatment were made with gonorrhea in its acute and chronic forms, also the various complications and sequelae, as tabulated:

	No. Cases	Cured	Failed
Acute Gonorrhea	111	100	11
Acute Gon. Prostatitis	8	8	0
Acute Gon. Prost. and Orch., Single	7	5	2

Acute Gon. Prost. and Orch., Double	2	2	0
Acute Gon. Periurethral Abscess..	3	2	1
	131	117	14
Chron. Gon. Prostatitis	263	250	13
Chron. Gon. Pros. and Orch., Single	20	17	3
Chr. Gen. Pros. and Orch., Double	15	15	0
Chron. Gon. Prost. and Vesiculitis	25	24	1
Gon. Per., Scrotal and Pros, Abcess	11	11	0
Gonorrheal Rheumatism	30	28	2
Gonococcimia	5	5	0
	369	350	19
	500	467	33
			6.7%

ACUTE GONORRHEA.

It has been my experience that the injections repeated every third or fifth day prove very efficacious in the treatment of acute gonorrheal infections, with or without complications. The oft repeated injections are continued, as a rule, until the abatement of the more acute symptoms. It is rare that any acute gonorrheal conditions will call for more than six to eight injections, as mentioned before, every third or fifth day. I generally start with about 7,500,000 gonococcic vaccine, then the next injection is 15,000,000, then the third injection of 25,000,000. Then I give 40,000,000 and 50,000,000 if I find it is necessary. I have found that in the cases in which I failed that perhaps my initial injection, or dose, was too large and raised the patient's opsonic index too high, which necessarily increased and aggravated the symptoms, increasing the flow of discharge and increasing the pain. In several of the above cases I could not give the vaccine at all, as it made the patient considerably worse.

I wish to report the following cases:

Case No. 1. A. B. W.—W. M. S., 24 years. Contracted acute gonorrhea as demonstrated by microscopical examination. This was his first infection. On January 26, 1909, I gave him 7.5 million gonococcic vaccine injected in the right inguinal region. Slight increase in the discharge on the next day. Microscopical examination showed an increased amount of pus cells, with the characteristic clumping arrangement, as above described.

On January 30, 1909, I gave him 15 millions gonococcic vaccine. A day or so later there was a decided decrease in the discharge, and upon microscopical examination I found very few gonococci present. On January 31, 1909, discharge checked entirely, and remained so throughout the treatment. On February 4, 1909, I injected into his right inguinal region 25 millions gonococcic vaccine. There was absolutely no reaction whatever. His urine became clear and free of all pus, and remained so. During the above treatment he received one daily irrigation of permanganate potash, 10 gr. to 32 oz. water. I had the above gentleman to call at my office recently, examining his urine that was perfectly free from shreds. It has been nearly eighteen months, and he has had no trouble whatsoever.

Case No. 2, F. H. F.—W. M. S., age 28. Referred to me by Dr. B. This was this gentleman's first infection, and he had been having discharge for three or four days before coming to me. However, he had not used any injection or received any treatment before. On December 18, 1909, I gave him 7.5 million gonococcic vaccine, with the characteristic reaction of increasing the discharge, and upon microscopical examination showed the gonococci present and clumping in the pus cells. On December 23, 1909, I gave him 15 million gonococcic vaccine, which on the following day checked the discharge slightly. On December 28, 1909, I injected 25 million gonococcic vaccine, which produced a very slight reaction. On January 3, 1910, I injected 40 million gonococcic vaccine, the following morning there was a slight morning drop, which I examined microscopically, and was unable to find any gonococci present. This morning drop did not appear any more. Then on January 10, 1910, fearing there might be some deep-seated infection I gave him 65 million gonococcic vaccine, which did not produce any reaction at all. I have recently examined his urine, as I did in the above case. His urine is perfectly free from pus and shreds.

ACUTE GONORRHEAL PROSTATITIS.

Case No. 3, J. A. M.—W. M. M., age 45. Professional man, lived in an adjoining town, referred to me by Dr. T. He had gonorrhea when 19 years old that lasted 10 or 15 days only, no trouble since. Contracted Neisser infection during a seance with a woman while away from his home. He endeavored to treat himself, and in the course of his manipulation he incited an acute gonorrheal prostatitis. There was a profuse discharge, severe pain in the rectum and perineum. Frequent urination, with inability to hold his urine. There was considerable hemorrhage following the act of urination, which was extremely painful and frequent. Microscopical examination showed large number of gonococci present. Hot rectal irrigation, suppositories of belladona and opium urotropin, 7½ gr. every three or four hours. On April 29, 1909, 7.5 million gonococcic vaccine given in left inguinal region, which next day produced a marked reaction, increasing the discharge and pain, which toward evening passed off somewhat. On May 5, 1909, I injected 15 million gonococcic vaccine, which also increased the discharge, but relieved the frequent and painful urination. On May 10, 1909, I gave him 25 million gonococcic vaccine; this injection seemed to relieve the discharge, there being now nothing but the morning drop, which was very small, he having discontinued the rectal irrigation and supositories. Urotropin irrigation of saturated solution boric acid daily given. The microscopical examination of this morning drop showed very few gonoccocci present. On May 15 I gave him 50 million gonococcic vaccine, and sent him home, with instructions to return to my office on the 21st of May, 1909, which he did, his discharge having

stopped entirely. But the urine contained a few shreds, which showed upon microscopical examinations pus cells but no gonoccocci. I then examined his prostrate gland, which I massaged. I found his gland very much reduced in size, with slight induration. I examined microscopically the secretion massaged from his prostrate gland, and was unable to find any gonoccocci present. He returned home to report to my office on the 27th of May, 1909, when I gave him 75 million gonoccoccic vaccine, massaging his gland, which was almost normal. Examination of the secretion from the prostrate gland showed the absence of gonoccocci. On June 3, 1909, he returned to my office and, examining the secretions, which were negative, I then had him to report to my office 15 days later, when I examined his gland also the secretion, and was unable to find any gonoccocci present. I have seen him repeatedly since, and he has never had the slightest trouble with his gland or any discharge. This was without a doubt the worst case of gonorrheal prostatitis that I have ever seen, and the great point in this case was that he could return to his home, attend to his work, and report at stated intervals receiving his injection, then return to his work, without being detained here for further treatment.

Aucte Gonorrheal Orchititis.

Case No. 4, J. M. W.—W. M., age 50. First infection of gonorrhea contracted in February, 1908, and he used the usual injections in these cases, and not getting the desired results from this line of treatment, he then injected a solution of peroxide of hydrogen into his ureters, which in a few days produced a right-sided epididymo-orchitis, with which he was suffering for about three or four days before consulting me. I gave him 7.5 millions gonoccoccic vaccine prescribing urotropin, and ordered a close-fitting suspensory bandage for him. I then gave him instruction to return to my office in four days. Microscopical examination of the slight discharge showed gonoccocci present. Upon his return to my office the urethral discharge had increased in amount, but the pain in the testicle was greatly relieved. I then gave him 15 million gonoccoccic vaccine. Five days later I gave him 25 million. With a slight decrease in the discharge, microscopical examination of the urethral discharge showed gonoccocci present. Five days later administered 50 million gonoccoccic vaccine. Following this injection the urethral discharge checked entirely. There was now absolutely no pain at all. I then examined his prostate gland, which I found slightly enlarged and found only a very few pus cells and gonoccocci present. In about 5 or 6 days later I gave him 75 million gonoccoccic vaccine. Examination of prostate showed reduction in size and induration relieved. Testicle almost normal, no pain except on deep pressure. Five days later gave him 100 million gonoccoccic vaccine without any reaction at all. Prostatic secretion negative. Owing to the fact that he was going to marry shortly I gave him two more injections of gonoccoccic vaccine, one of 125 million and one of 150 million at a five-day interval. Neither one of the injections produced any reaction. Examination of the first urine passed in the morning was free of pus and shreds and perfectly clear. The urine was centrifugalized and examined, which was negative. Microscopical examinations of the prostatic secretion, massaged, were examined repeatedly, which were negative. Dismissed well. And to my certain knowledge he has never had the slightest return of this trouble.

Cas No. 6, W. L. D.—Fireman, S., age 29. W. M. consulted December 23, 1908, with acute gonorrheal orchitis, left side, with the following history:

Acute gonorrheal infection of few days standing, and whether due to sliding down the pole at fire hall, or to using too strong urethral injections forced back into the deep urethra, he does not know. Severe pain and constipation, with a very large sore, tender and inflamed testicle on left side, inflammation extending way up the spermatic cord.

On December 23, 1908, 10 million gonoccoccic vaccine injected; December 24, 1908, pain slightly decreased, discharge increased, which contained gonoccocci; December 28, 1908, 20 million gonoccoccic vaccine injected. December 30, 1908, testicle reduced very much in size and pain absolutely gone, except upon deep pressure. Discharge not quite as profuse. January 2, 1909, 35 million gonoccoccic vaccine given. January 4, 1909, testicle nearly normal in size, no pain. Discharge very slight, which contained gonoccocci. January 8, 1909, 50 million gonoccoccic vaccine. January 15, 1907, 75 million gonoccoccic vaccine given. No pain or soreness in testicle. January 15, 1909, 100 million gonoccoccic vaccine given. No reaction. Pain and discharge none at all. January 28, 1909, first morning urine, clear, free from shreds and pus. Prostate examined, found to be normal, secretion examined, no gonoccocci.

What has impressed me more in the above cases, as well as with all of my other gonorrheal orchitis cases, has been two factors: First, that I have given no medicine internally, but urotropin to keep the urine in as healthy a condition as possible and to relieve the irritation. Second; nothing has been applied to the scrotum but a close well fitting suspensory bandage, keeping the bowels open, and the use of gonococcic vaccine. Another point I wish to call your attention to is the fact that following these cases of acute gonorrheal orchitis, treated with gonococcic vaccine, I would never find the hard duration in the epididymis, as we generally find a hard button or induration following all gonorrheal inflammation of the testicle or epididymis. The vaccine treatment seems to clear out and open up the cord leading from the testicle to the prostate gland. I have noticed that several of my patients who are suffering with acute gonorrheal orchitis, have married after being discharged well, and in the course of ten to twelve months their wives have had babies. Which proves conclusively to my mind that gonorrheal inflammation of the

testicles will not render the individual sterile. In those cases that I have met failures with the gonococcic vaccine, the pain and swelling has increased, and it seemed that after each injection the patient would get worse. These cases then were treated in the regular methods without the gonococcic vaccine, but were never able to remove the button or induration of the epididymis, as we can with the gonococcic vaccine.

I have found gonococcic vaccine a very valuable adjunct in the treatment of acute gonorrheal periurethral abscess, as, after incising and draining the abscess either externally or internally (through an endoscope), would give gonococcic vaccine in the regular size dose, and at stated intervals there would be very little scar tissue following, as the gonoccoccic vaccine seems to drain the tissues and relieve the inflammatory products.

CHRONIC GONORRHEAL PROSTATIS.

In April, 1909, I read a paper before the Alabama State Medical Association, in Montgomery, Ala., "Treatment of Deep-Seated Gonorrheal Infection with Gonococcic Vaccine." I then reported twenty-one cases treated and cured, and to this day I have never seen a single relapse. I have had far better success in the treatment of this class of cases with gonococcic vaccine that I have had with any other class of cases. For here we have a deep-seated gonorrheal infection, and in which we cannot get the medicine to penetrate the deeper tissues. We may use the various solutions which only wash over, so to speak, while the numerous silver preparations only set up a localized inflammation that does not go deep enough.

In a number of cases we have patients who have only a "morning's drop" that does not contain any gonococci, but I have found that after the use of gonococcic vaccine we can find gonococci present in the discharge, and the second or third injection generally increases the discharge. This discharge is then checked by repeated injections at stated intervals with increasing doses. However, I have used the massaging of the prostate gland in connection with the gonococcic vaccine treatment, as reported in my paper before this society June, 1908, "The Treatment of Chronic Prostatitis," and as Elbright recently reported that the massaging of the prostate gland in chronic gonorrheal prostatitis where the opsonic index is low will cause a sharp positive phase raising the opsonic index.

I have found in a number of cases that have received the vaccine treatment in these cases in the hands of other physicians, and who were unable to get results, that they gave too large doses of gonococcic vaccine and at too close an interval, very often giving 50,000,000 gonococcic vaccine every day.

My experience has been to start with 25,000,000 gonococcic vaccine and increase 25,000,000 gonococcic vaccine every five, six or seven days, depending upon the clinical reaction. I have never found it necessary to give more than 150,000,000 to 200,000,000 gonococcic vaccine as the largest dose. Now very often after giving a patient vaccine for quite a while he may continue to have a slight morning drop which does not contain the gonococci, but this discharge may be due to a slight stricture, a granular urethritis or folliculitis, which, of course, must be treated accordingly, and one should not place the blame at the door of gonococcic vaccine for these failures, if there are other complications, as the gonococcic vaccine will only remove the gonorrheal infections. I wish to report the following:

Case No. 7, C. M. R.—S. W. M., age 30. Has had gonorrhea for the last four or five years, and has received the various treatments of injections, dilatations, etc. There was only a slight discharge in the morning, which did not contain gonoccocci. On October 31, 1908, there was a decided increase in his urethral discharge, which contained gonoccocci. November 5, 1908, he received 50 million gonoccoccic vaccine, which produced a slight reaction in the amount of discharge, which contained gonoccocci upon microscopical examination. November 12, 1908, 75 million gonoccoccic vaccine given. On November 15, 1908, discharge or morning drop checked entirely. November 19, 1908, 100 million gonoccoccic vaccine. There was no reaction at all from this injection. Prostate massaged, secretions examined, no gonoccocci present. November 27, 1908, 125 million gonoc-

coccic vaccine given. No reaction at all. Urine clear, free of pus and shreds. This patient received a prostatic massage every third day. No recurrence when last heard from.

Case No. 8, W. M. McC.—W. M. M., 35. Office man. Out of town patient. Slight morning discharge, which, upon microscopical examination, showed the gonoccocci present. Has had "gonorrhea off and on for the past three years." Usual injection treatment. The discharge, after being checked, would always return after intercourse and drinking. Owing to the fact that this patient lived out of town, I saw him only twice a week, massaging his prostate gland twice a week and giving him gonoccoccic vaccine every seventh day. On May 5 I gave him 25 million gonoccoccic vaccine, and increased the dose 25 million of gonoccoccic vaccine every seventh day. The last injection being 175 million gonoccoccic vaccine. Prostate examined and secretion examined, which did not show the presence of gonoccocci.

Chronic gonorrheal prostatitis and vesiculitis; we all gnow that in a gonorrheal inflammation of the prostate gland and the testicles that the seminial vesicles are more or less involved, and especially do we find the vesicles involved in gonorrheal rheumatism. In these cases where we have an intense induration and an enlargement of the vesicles, either one or both of them, that I have never found anything that will assist in the drainage of them better than the vaccine. As we know, we have no medicine that will reach them as readily as gonococcic vaccine.

GONORRHEAL RHEUMATISM.

The effect of the treatment of gonorrheal rheumatism with gonococcic vaccine has been recorded by numerous observers, and our medical journals are full of reports of these cases. The clinical picture of gonorrheal rheumatism is so well known that little need be said concerning it. In ordinary cases following a few days or weeks an initial urethritis or the lighting up of an old urethral infection, then joint involment, with pain, tenderness, swelling and frequent effusion. A typical gonococcus reaction is characterized by a rise of temperature, often slight, an increase in pain and tenderness in the affected joint with occasionally some swelling and a variable degree of malaise. The symptoms follow the injection in from eight to twelve hours and commonly last for about twenty-four hours. Frequently there is a decided tenderness at the site of the injection, greater than occurs after the inoculation of the same dose of the same preparation in normal subjects. Prostatic massage as stated has long been recognized as a valuable measure in gonorrheal rheumatism. It is highly probable on clinical grounds as well as from its effects in raising the opsonic index that prostatic massage results in an autoinoculation, similar in its effect to the injection of killed gonococcic cultures. I wish to report the following case that I saw during my service at the Hillman Hospital during the year 1908:

Case No. 15, B. R. W.—M. S., age 19. Received a gonorrheal infection in February, 1908, and was treated in the usual way with astringent injections. When in the early part of March, 1908, he developed gonorrheal rheumatism and was treated for a few days and sent to the Hillman Hospital, where he received the proper treatment for his condition, such as rest in bed, sodii, salicylate, aspirin, Bier hyperemic treatment without any good results. I saw him on the 8th of April, 1908, with the following joints involved: Left and right hip joint, left ankle, right knee. He was unable to get out of bed without assistance, and could not walk, even with crutches. I gave him on April 8, 1908, 50 million gonoccoccic vaccine, and the following day there was a slight reaction, with a rise of temperature, increased pain and swelling in the affected joints. April 13, 1908, 100 million gonoccoccic vaccine. Very slight reaction, in a day or two the pain was relieved, also swelling in joints. April 18, 1908, 150 million gonoccoccic vaccine; no reaction as to pain and temperature. All the affected joints were less painful to touch, and he could move them more freely. April 25, 1908, 200 million gonoccoccic vaccine. When he was able to sit up at the hospital and could get around with the aid of crutches, May 1, 1908, 250 million gonoccoccic vaccine injected; no reaction, as he had no pain then and very little swelling. On May 5, 1908, he left the hospital, reporting to my office on crutches. May 8, 1908, gave him 300 million gonoccoccic vaccine, which did not produce any reaction. Prostate gland was massaged every third day. May 15, 1908, 350 million gonoccoccic vaccine given; no reaction. Prostate gland massaged, secretion examined, no gonoccocci present. May 22, 1908, 400 million injected, there was no reaction. May 29, 1908, 450 million gonoccoccic vaccine given, prostate massage secretion examined, which was negative. June 5, 1908, 500 million gonoccoccic vaccine given. No reaction at all. Prostate gland massaged, secretion examined microscopically; no gonoccocci present. I then stopped giving him gonoccoccic vaccine, having him to report to my office for examination for several weeks. He returned to work on the 8th day of June, and has worked as helper in blacksmith shop ever since without any trouble. I saw him several months ago, and he stated to me that he has had no trouble at all since I dismissed him.

In those cases that I failed to get any re-

sults in, I think I did not start with proper size doses, or perhaps there may have been some fibrous adhesions, which I don't think vaccine would dissolve and they would call for surgical interference. In gonorrheal rheumatism I generally give 50,000,000 gonococcic vaccine every six or seven days, increasing 50,000,000 gonococcic vaccine at each dose until I am thoroughly satisfied with my patient's condition.

GONOCOCCEMIA.

Cases of continued fever, in some instances resembling typhoid, have frequently been observed in the wake of gonorrhea and gonococcus sepsis without demonstrable localization has been recognized as a clinical entity. Thayer in 1905 reported a non-fatal case of this kind in which the gonococcus was isolated from the blood. Recently Dieulafoy has reported a case of gonococcus sepsis with recovery without demonstrable heart lesion in which the gonococcus was isolated repeatedly from the blood.

Hewes, Undger, Ore and others have isolated the gonococcus from the blood during the course of gonococcus infection, with its attendant complicating involvment of the serous membranes, prominent among which are those of the heart and the joints. It becomes evident that the gonococcus is one of the most frequent invaders of the circulating blood.

Chief among the factors which have combined to render the demonstration of the gonococcus in the blood relatively rare compared with the frequency with which a bacteriemia is demonstrated by culture in typhoid fever and pneumonia, may be mentioned the difficulties in growing the gonococcus, its relatively small numbers in the blood (judging from most of the cases in which it has been demonstrated), its probable sporadic occurrence in the blood from time to time in any given case (e. g., arthritis) and finally our failure to regard cases of metastitic gonococcus lesions as presenting a possible demonstrable gonococcemia. In many cases of systematic gonococcus infection the diagnosis remains obscure, by reason of the clinical resemblance to other diseases, such as typhoid fever, acute rheumatic fever, malaria or some of the other forms of sepsis, and it not uncommonly happens that only late in the course of the disease or at the post-mortem table is the true etiology discovered. I wish to report a very interesting case of gonococcemia:

Case No. 29, F. F. C.—M. M. W., age 35. Coal miner, had gonorrhea for ten months previous to consulting me. Had no discharge for several months. He had lost considerable weight Physical examination at that time showed that he was poorly nourished, pale, and markedly anemic, with haemic murmur at the base. Chest otherwise normal. One of the leading internists in this city had diagnosed his condition as pernicious anemia, with a very unfavorable prognosis. Prostate gland was very much enlarged, soft and tender. I sent him to St. Vincent's Hospital, placing him in bed with hot rectal irrigation twice daily. Hot sitz bath in the afternoon, with a cleansing bath in the morning. I gave him 25 millions gonoccoccic vaccine on June 20, 1908, keeping up the above treatment, and on June 26, 1908, I gave him 50 million gonoccoccic vaccine. The fist injection produced slight reaction, and the second inoculation had a more marked reaction, for the following day there was a slight urethral discharge, which, upon microscopical examination, contained gonoccocci. Prostate gland massaged every third day. July 1, 75 million gonoccoccic vaccine given, very slight reaction, discharge was much less. July 8, 1908, 100 million gonoccoccic vaccine given. Reaction none, discharge entirely checked, prostate gland reduced in size to almost normal. Patient gained strength and was sitting up on the 10th of July, 1908. On July 11, 1908, I let him go to his home at New Castle to report back on the 15th of July, 1908, for 125 million gonoccocci, prostate gland massage. No reaction at all. Secretion examined, few gonoccocci present. July 27, 1908, 175 million gonoccoccic vaccine. No reaction. Prostate massage, secretion examined, no gonoccocci. August 5, 1908, 200 million gonoccoccic vaccine, no reaction, prostate massage, secretion examined, no gonoccocci. Patient gained 3.4 pounds. I recently saw him, and he has been at his former occupation, perfectly well in every respect.

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DISCUSSION.

Dr. W. P. McAdory, Birmingham, Ala.—"I did not expect to be called upon to open the discussion on these papers, as I am not competent to do so, not having used the vaccine in any case except in gonorrheal rheumatism. In gonorrheal rheumatism I have gotten good results with it. I feel very grateful to the men who started the use of it, but up to that time I had not gotten hold of anything so satisfactory as vaccines in the treatment of gonorrheal rheumatism. It was the bane of my existence. So far as the use of the vaccines are concerned in the treatment of gonorrhea, I have had absolutely no experience with them."

Dr. Raymond Wallace, Chattanooga.—"I have had some experience with gonoccoccic vaccine, and it tallies with that of the author of the paper. I have had the best results in cases of gonorrheal rheumatism. I recall four cases in which three or four injections cured this form of rheumatism. I think we should be sure, however, that the rheumatism appearing in the course of gonorrhea is gonorrheal in nature. Where you have a patient who has a gonorrheal discharge you can make up your mind that if he has rheumatism it is gonorrheal in origin, and these are the ones which have been successfully treated, as Dr. McAdory has said, with the vaccines. In the acute form of this trouble I tried the use of the vaccines early, but in the last two or three years I have not used them at all, because they are of no value whatever. I treated one girl, twelve years of age, of a fine family, who had gonorrheal vulvovaginitis, which was caused by the patient taking a bath in a tub in which a servant had been bathing and had a vaginal discharge. In this case I began with five million and began with local treatment, and got along pretty well. I had one child who had a terrible time, but she got well in two or three months, but from swabs and smears, etc., I could demonstrate no germs or gonoccocci, and there was no recurrence of the disease. I do not believe in the acute cases the vaccine is of any value. In cases of orchitis and epididymo-orchititis it is of great value, and I consider it a valuable adjunct in the treatment of these cases."

Dr. E. Denegre Martin, New Orleans.—"I believe that gonorrhea is a self-limited disease, and that if we just give it time it will get well of its own accord. The reason the disease continues is because patients do not take care of themselves in the matter of sexual intercourse, and if you put these men to bed, they will get well of themselves in a limited time.

Dr. W. W. Crawford, Hattiesburg, Miss.—"I believe the consensus of medical literature on the subject of gonoccoccic vaccine is that in these cases it has a special field of usefulness, and not in acute gonorrhea, but in those cases suggested by the doctor of prostatic, epididymitis, etc. This is particularly true of pelvic infections in women. We find now and then a case who has an acute salpingitis as the result of gonorrheal infection, with a very marked reaction. In a reasonable number of cases, and especially those in which we have to do surgery, I recall to mind a woman on whom I did a hysterectomy, who had old pus tubes, and we thought we had a sterile condition to deal with from the length of time she had the inflammatory reaction in the pelvis. But after I had operated I discovered she had a recent infection superimposed on the old gonorrheal infection some four or five years previously, which occurred at the birth of the child. From my experience in this case, I confidently believe that but for the use of vaccines, using them in large doses, giving fifty million the first time, and I think a hundred million each day for two or three days, she would have died, but we got an additional reaction through the use of the vaccine. Now, I know there is a great deal being said as regards the time or intervals that should elapse between the use of these vaccines. Of course, the use of vaccine, as has been suggested by Dr. Livermore, dates to Sir Edward Wright's discovery, and that is very, very recent. No man has had more than a few years' experience with these cases, therefore every man who has used it to any great extent for two or three years has a right to form his own conclusions, and a great many men are disputing the idea that we must give doses of the vaccine some five or six days apart. Personally, in the few cases in which I have used it—and they have largely been gynecological cases—I think I have obtained the best results when I gave doses every day for the first few days."

Dr. Livermore (closing the discussion).—"I have very little to add to what I have already said, other than to thank the gentlemen for their discussion of my paper. I have had no experience with gynecological cases in the use of vaccines, so I do not know anything about them in that line. I want to answer the statement made by the chairman of this section that gonorrhea is a self-limited disease, and that if you give it sufficient time it will get well of itself. I read a paper before the Tri-State Medical Association at the last meeting in which I made a plea for the education of the public as to the seriousness of gonorrhea. I would like to condemn in the strongest language any statement like the one our chairman has just made, that gonorrhea is a self-limited disease, and will cure itself, because it is absolutely and unequivocally a mistake. Gonorrhea will never cure itself, and when once it has developed, God only knows when it is going to stop. I have a man as a patient who had gonorrhea twenty-six years ago, and for twenty-four years he has been a straight, upright, decent man. He has never been outside of

his household during that time for the purpose of sexual intercourse, and I find active gonoccocci in the prostatic secretion to-day. How such a man as Keyes can write a book and in it recommend a trip across the ocean or a trip to the Adirondack mountains to cure an old case of gonorrhea is beyond me. The gonoccocci find their way into some of the follicles in the prostate gland or the seminal vesicles, and they will become active some day and cause complications, and let us not go on record to the effect that gonorrhea is a self-limited disease.

THE TREATMENT OF TRACHOMA.*

By H. H. MARTIN,
Savannah, Ga.

It is not my intention to present to you an academic paper on the treatment of trachoma nor to review the literature on that subject, but to present for your discussion a very simple method of treatment for this disease which has proven most effective in my practice.

Any method of treatment of any diseased condition must be based or formulated upon a fairly comprehensive knowledge of the pathology of the disease in question.

Briefly the essential pathological conditions found in trachoma are: Hypertrophy of the conjunctival papillae with a round celled infiltration of the mucous follicles. The former being a more or less permanent alteration in the anatomical structure of the conjunctiva, while the latter undergoes all of the changes consequent upon the conversion of round cells into spindle cells and the ultimate formation of connective tissue with the deplorable conditions resulting from contraction, friction, etc.

This disease is unquestionably caused by a specific organism, the exact nature of which is not as yet definitely known. The relation of the so-called "Trachoma Bodies" of Halbersteder and Von Prowazik to the disease has not as yet been definitely established. The medical aspect of the treatment must, therefore, for the present at least, as it has in the past, be formulated upon empiricism pure and simple. The surgical aspect of the treatment of this disease, however, can be formulated upon more definite scientific principles.

In formulating a method of treatment of any disease we must begin with a careful study of the indications for treatment, taking each of them separately and finally all of them collectively.

The indications for treatment in trachoma are as follows: First, the causative factor must be sought out and rendered inocuous. Second, the hypertrophy of the papillary elements of the conjunctiva must be arrested, and, so far as possible, eradicated. Third and last, the mucous follicles must be emptied of their pathological contents and must be kept in that condition.

The first of these indications I have referred to as the medical aspect of the treatment and can be formulated upon empiric methods only. But empiricism has taught us many things in the past, and not the least of these is that sulphate of copper is fatal to the causative element of trachoma if brought into contact with it. The second indication for treatment, namely, the papillary hypertrophy is met in this instance by the same remedies used to combat the causative element, since the copper salt is fortunately astringent as well as germicidal. The third indication in the treatment of trachoma is purely surgical and has for its object the emptying of the follicles of their pathological contents and maintaining them in that state until the conjunctiva is restored to a more or less normal anatomic state.

In the medical treatment of trachoma the

*Read before the Section on Opthalmology of the Southern Medical Association, Nashville, Tenn., November 8-10, 1910.

list of remedies which have been brought forward at different times by different men is so very large that it goes to prove the old saying that when many remedies are offered for any disease it is proof positive that none of them are effective. The most prominent among these are the silver salts, the copper salts and the bichloride of mercury. With the various operations for trachoma you are all familiar.

I am of the opinion (based on a close observation of a large number of cases) that no medical treatment alone will cure trachoma, and I am equally sure that no surgical measure alone will cure trachoma.

But I have demonstrated to my own satisfaction that a judicious combination of the two will eradicate this disease in an eminently satisfactory manner. Prior to June, 1909, I had, in operating for trachoma, tried all of the different methods of operating which had come to my knowledge with a decided preference for the Noyes forceps.

At that time I saw Coover, of Denver, operate on trachomatous eyes with sandpaper and since I had not seen or heard of this procedure before, I call my present treatment of trachoma the "Coover Method," disagreeing, however, with Coover in his claim that the operation is alone sufficient to effect a cure. Coover's technique is as follows: No. 0 or 00 sand paper is first sterilized by pouring over the surface pure alcohol, setting fire to the alcohol and allowing it to burn off; the lids are then everted with straight grattage forceps and the follicles are gently but thoroughly scrubbed out with strips of the prepared sandpaper until the conjunctival surface is perfectly smooth, being particularly careful to avoid the cornea; the conjunctival sac is then flushed out with bichloride solution and the case is expected to recover without further treatment. The modifications I have made in Coover's method are as follows: First, I make no attempt to sterilize the sandpaper, using it just as it comes from the shop; all such attempts having proven in my hands both troublesome and unsatisfactory.

Second, I use only 0 sandpaper, the double 0 being too fine. Third, I follow up the operation with daily applications of a solution of copper sulphate, beginning on the second day after the operation and continuing for eight weeks. In a series of sixty cases which I reported at the last meeting of the American Academy of Opthalmology and Oto-laryngology, forty-five were treated in this manner and fifteen had no after treatment at all. The cases were all carefully examined for trachoma ten months later, with the following results: Of the fifteen cases which were treated surgically only, there were 80 per cent of recurrence. Of the forty-five in which the surgical treatment was followed up by the medicinal treatment, there were but 13 per cent of recurrence, and in these cases the after treatment was carried out in an orhpan home by very unskilled attendants and there is every reason to believe that had the after treatment been carefully administered there would have been a still smaller per centage of recurrence in those cases.

In doing this operation the patient is anesthetized, the conjunctival sac is flushed with 1:2000 bichloride solution and the follicles are carefully scrubbed out with strips of 0 sandpaper about ½ to ¼ inch in width. The conjunctiva should not be lacerated and the cornea must not be touched. Immediately upon the completion of the operation the conjunctival sac is flushed with normal salt solution to free it from any loose particles of sand, then the lids are carefully everted and thoroughly scrubbed with pledgets of gauze wet with 1:2000 bichloride solution (this, in my opinion, obviates the necessity for steriliznig the sandpaper).

Following this operation the eyes require no treatment or applications of any kind, as the reaction is very slight. But beginning on the second day afterward the copper solu-

tion (5 to 10 per cent) is applied daily for eight weeks with an ordinary medicine dropper, being careful to get the solution under the upper lid.

SUMMARY.

In order to effect complete cure in chronic trachoma, surgical and medical treatment must be combined, as neither is sufficient in itself.

Of the surgical methods, the one which I have called the Coover Method is the most satisfactory from all points of view.

For local application a 5 to 10 per cent solution of copper sulphate has no rival, but it must be begun soon after the operation and continued for eight weeks.

Any attempt to setrilize the sandpaper is troublesome, unsatisfactory and unnecessary if the conjunctiva be scrubbed with bichloride after the completion of the operation.

DISCUSSION.

Dr. G. C. Savage, Nashville, Tenn.—"One of the best things I ever did was to outline, a good many years ago, a method of treatment of trachoma, which method I have had no cause for doubting from that day to this. By recent trachoma I mean those cases that would justify scrubbing with sandpaper or with toothbrush, or any other surgical procedure. I suppose everyone of you knows what is meant by recent trachoma. I wish I could recall just what it was, or who it was that led me to adopt the method of treatment which I did adopt many years ago and published freely. A good many have seen the publication and a good many have written me, thanking me for the treatment outlined, but I do not recall just how I got into it. Chloretone had not been on the market very long when I thought I would find what good there was in the local use of it. I will give you the method of treatment that I have the utmost confidence in in recent cases of trachoma. I have four formulas. I do not think I shall ever forget them, because I shall keep on prescribing them: (1) Suprarenal liquid with chloretone. Put two drops in each eye every morning. (2) Hydrastine alkaloid, grains 2, acetic acid (No. 8) drops 4, zinc acetate and copper acetate, of each two grains. Distilled water, one ounce. Put two drops in each eye after dinner. (3) Bichloride of mercury, 1-7 of a grain. Chloride of zinc, one grain, distilled water, one ounce. Mix. Write: Put two drops in each eye after supper. (4) Europhen, grains 4, lanoline and vaseline, grains 4. Put same in each eye at bed time. Now that is the outline of my method, and my only method of treating recent trachomas. The first very marked impression that I got from the beneficial results of this method of treatment occurred a good many years ago. There were, as I recall it, fifty-five children in the Protestant Orphans' Home of this city. The matron of that home sent for me one afternoon to come out to see the children, that they were nearly all suffering with some form of inflamed eyes, and that some of the cases had been in existence for quite a while. I went out and carried Dr. Doak with me, and we went over the cases. Fifty-two had well-marked cases of trachoma. They were all attributable back to one child that had been introduced in the home some time before. Her eyes gave evidence of being an older case than we had found in the other children. There could have been no doubt about its being trachoma. I think I know it in any stage, and I think I know it in recent stage. I prescribed for those children, giving them the formulas that I give you to-day, and I made only two more visits to that home. There were one hundred and four eyes to medicate four times a day. I taught the matron and her assistant, but they made a big improvement on what I taught them. Their method was such that in just twenty minutes all of the one hundred and four eyes were medicated She commanded the children to lie down in the hallway with their heads in an even line, and she went to each one and pulled the lids apart, while the assistant put the drops in. They went through with this performance four times a day. They got through with the ointment about as soon as they did with the drops. You may be astonished when I tell you that I made only two more visits to that institution before the children were dismissed. It was only a little while, I believe only six or eight weeks at the outside, until those children were well.

Dr. M. Feingold, New Orleans, La.—"I would like to ask the doctor why he used a general anesthesia in that case. I have not used the sandpaper method the doctor describes, but have used other methods on the conjunctiva, and must confess that I have gotten along very well on cocaine. Another point I would like to mention is that with the sandpaper method is there not danger of injuring the conjunctival sack, that one or two grains of sand will remain in the lymph follicles and cause trouble."

Dr. M. M. Cullom, Nashville, Tenn.—"The longer I treat trachoma, the more I am convinced that any method to bring satisfaction must involve some form of friction. I have tried a good many methods, and all forms of friction that I have tried have worked well. I used to operate often on these cases. I do not operate as often now as I once did. The operation that I did is one that Dr. Martin and I used in Manhatton Hospital together, that is, rubbing the conjunctiva with a toothbrush with one five hundredth of a grain of bichloride. I bandaged the eyes after operation to prevent the marked reaction that follows that method of treatment. That has worked well in the two cases where I have used it. In recent years I have used friction on the conjunctiva with cotton tip probe dipped in a solution of argyrol, a twenty-five per cent solution. This method, I believe has worked better with me than anything I have tried. I have the patient to come in three times a week and use this treatment. I have also used a solution of sulphate of copper, five grains to the ounce of glycerine. These methods have been very satisfactory in my hands. I do not know just what cures Dr. Savage's cases, but I am inclined to think that

it is mainly due to the simple solution of copper that he uses. I believe it is a bad plan to entrust the treatment to the hands of the patient, as he has done. If he had not had careful people to look after his patients, they would not have done as well as they did at home. If you turn a patient loose to look after himself, he will neglect himself. I think we should keep these patients under observation, and have them come to see us and treat them ourselves. Since I have been using this method of treatment with argyrol, my results have been better than with any other method I have used."

Dr. J. T. Herron, Jackson, Tenn.—"I will give my testimony as to argyrol. I have a very stubborn case. One eye, the right eye, had trachoma, but the left eye has a severe case of pannus. Dr. Savage was down some time ago and suggested jequirity. The patient got along beautifully on using this, but relapsed after a few weeks, and got just as bad as could be. Only light perception, and then I had to use Knapp's forceps. When she came to me she had been treated by some one else for seven or eight months. When she had this relapse, I used argyrol, as I found the solution of copper irritated that eye very much, and seemed to irritate the granulations on the lid. I did not find this out for some time, because I had the utmost confidence in the copper solution. I put her on a twenty-five per cent solution of argyrol, and it is wonderful to see how much clearer that eye is, and how the granulations have subsided. I am using it now, and shall use it for some time to come. Then use the copper. In fact, I like fifty per cent of copper to the ounce of glycerine, and one drop of that to twenty drops of water. I make the application with the argyrol direct when I use that alone. I use this solution every two or three hours during the day. I use it at nine in the morning, one in the afternoon, and then at four in the afternoon. When I can I use it four times a day. I use iodoform ointment at night, and this case is getting on beautifully. Her vision is improving right along. She can see down to 10-70 on the board, whereas just a few days ago she could scarcely discern daylight. I think it is going to revolutionize eye treatment, notwithstanding a physician in New York said he had a perfect contempt for any man who would use argyrol. Notwithstanding what he has said, and what many others have said, I use it in preference to all other preparations. In fact, you can use it two hundred grains to the ounce. There is no irritation produced; you can use twenty-five per cent every two or three hours. Granulations will soon soften and go down like magic.

Dr. Wm. C. Lyle, Augusta, Ga.—"I have listened with considerable interest to this discussion. I am inclined to believe that we may be deceiving ourselves over the good results with argyrol. There can be no question of the fact that argyrol acts nicely in very recent cases. I would not hesitate to say that argyrol would cure recent cases, but after you have a well developed case, if you consider pathological conditions, you will not expect to cure it with the use of argyrol. I have used it, and continue to use it. I cannot depend on it alone. In well developed cases I have to use both medical and surgical treatment. You cannot get rid of an old hanging flap by the use of medicine. I have not been able to do so. I was very glad indeed he spoke of the europhen ointment which he had used. I have never used it. Simply had depended on the yellow oxide of mercury ointment, when I used ointment of any kind. During recent service under Dr. Brooks I found the ointment used just as the doctor used it, but they still rely upon surgical intervention where the follicles are hard and well developed. I am inclined to think you secure good results in new soft follicles, but I do not think any application is going to entirely cure the case."

Dr. U. S. Bird.—"For what length of time do you use argyrol?"

Dr. J. T. Herron.—"I use it as long as there is any inflammation. I find the copper a very great irritant. Use this preparation of argyrol for two or three weeks at a time, and then change to a weak solution of copper."

Dr. G. C. Savage.—"I would like to ask author and member if they have entirely abandoned jequirity in old cases?"

Dr. H. H. Martin.—"I do not know how to account for Dr. Savage's results. They are entirely beyond my comprehension. I have never had any treatment equal to that in results. In answer to the question why I use an anaesthetic will say I think a man who would do this operation without a general anaesthetic is very brutal. The use of argyrol I have found absolutely of no apparent benefit so far as trachoma is concerned. Where you have a mixed infection with a purulent discharge, then I do not think you have anything better than argyrol for treating this, but in so far as its effect upon trachoma, I cannot believe it has any possible effect. Very recent cases of trachoma, cases that have existed only a few days and are in an acute inflammatory stage, I have seen get well with the mild solution of copper sulphate. Dr. Lyle, you must consider patholgical conditions, and must treat your cases in acordance to relieve conditions. Instead of having the cases on hand for months and months, do the radical surgical method, empty these follicles, and then apply the medicine and allow the conjunctiva to be restored to a relatively normal state, and it will not come back unless reinfected.

THE SURGERY OF THE TONSILS.*

By HILLIARD WOOD, M.D.,
Nashville, Tenn.

In considering the different methods by which the faucial and third tonsils may be either partially, or totally removed, it is apparent that no one plan is best for each and every case. Experience would seem to teach that the technic should be varied with the case in hand. That the total removal of all tonsillar tissue in each case would be ideal is hardly to be denied, but that such removal is in every case feasible, or practical, I seriously doubt. To remove in each case as much of the tonsillar tissue as can be removed with prudence and safety would seem to be the correct procedure. I believe that this total removal of the tonsillar tissue can be done with more safety and success in certain cases than in others. According to whether the removal of the tonsillar tissue is partial, or total, the operation may be discussed under the separate heads of tonsillotomy and tonsillectomy.

It has been my custom to confine tonsillotomy to young children—say children under 10 years of age. At this age enlargement of the faucial tonsils is usually associated with adenoids, and under general anaesthesia the faucial and third tonsils may be removed at the same time.

I will briefly describe the method by which I do tonsillotomy in children and will then give the reasons for it. The child, having been prepared for general anaesthesia, and having on a wrapper, gown or other washable garment, is set straight up in a chair, the arms and feet being firmly secured by straps extending around the chair. The mouth gag is next inserted and, during the administration of the anaesthetic, is held in place by the operator. The anaesthetic used is the chloride of ethyl. The anaesthetist stands behind the patient, the patient's head resting against his chest. Complete general anaesthesia is produced. This seldom requires, in children, more than one minute. The inhaler is then laid aside, the anaesthetist steadying the patient's head and holding the mouth gag. An assistant depresses the tongue. The operator then does the tonsillotomy with a double Volcellum forceps and a probe-pointed bistoury, cutting from below up, and removing first the right tonsil and then the left. The tongue depressor is then withdrawn, and the operator removes the adenoid with the Delstanche curette. The actual operation requires from one-half to one minute. The patient is then quickly placed face down upon a table, the head projecting beyond the end of the table, the blood being caught in a basin underneath.

This, with slight modifications, is the technic I saw used in the Gray's Inn Road Hospital, of London. I have now used it during the past five years in over two hundred cases and with excellent general results. The advantages of this plan are: That the patient is sitting upright in front of the operator, in which position the operator can best get at the tonsils; that the patient is anaesthetized, thus avoiding resistance and shock and that the operation is quickly over, seldom requiring for the anaesthetic and operation more than one or two minutes. The only disadvantage I have noticed about ethyl chloride is that the anaesthesia does not last long enough to permit a careful tonsillectomy. When this method is carefully carried out the danger of blood entering the trachea is practically nil. I would caution any one wishing to try this plan that it cannot be carried out without

*Read before the Section on Ophthalmology of the Southern Medical Association, Nashville, Tenn., November 8-11, 1910.

two trained assistants, one to give the anaesthetic and one to depress the tongue during the removal of the faucial tonsils. In Children the pillars of the palate have not the acquired attachments to the tonsils that are common in adults. For this reason when the Volcellum forceps grasps the tonsil and draws it toward the median line if the operator will wait a few seconds he will see the pillars slipping back—retracting from over the body of the tonsil—so that more of the tonsil can be removed than was at first sight supposed. Thus a fairly thorough tonsillotomy can be done. If we are to judge this method by its results I should say it is very good, for in not above 2 or 3 per cent of the cases has a second operation been required. In removing the adenoid the advantage of the Delstanche curette over other curettes is that it brings out the mass cut off, so the operator can see the size of the piece and, if necessary, can immediately remove more or scrape the base of the third tonsil, thus insuring against future trouble from that source.

I have at times sought to vary this technic by laying the patient upon the table, administering ether, and doing a cold snare tonsillectomy. But the accumulation in the fauces, first of mucus and then of blood, has proven a serious hindrance.

In adolescents and adults, who are willing to stand a certain amount of pain, I think the faucial tonsils should be removed under cocaine anaesthesia by a cold snare tonsillectomy. In carrying out this plan I believe the best anaesthesia is obtained when the cocaine is dissolved in a solution of adrenalin chloride 1-2000. This solution is not only mopped upon the fauces and tonsils, but several minims are injected along the pillars and at the apex of the tonsils. For separating the pillars from the tonsils I prefer the Abraham's-Allport pillar separator. In doing this step of the operation I wish to call attention to the fact that the apex of the tonsil extends some distance upward and outward, and this top portion should be grasped by the Volcellum forceps, drawn well toward the median line and carefully dissected out with the palate separator. The operation is then completed with the cold snare. For this purpose I do not know of any instrument so satisfactory as the Kratzmueller snare, armed with a No. 8 or No. 9 piano wire. Smaller wire, as No. 7, will sometimes break, as has at times happened to me. The advantage of the wire over cutting instruments is, of course, the lessened danger of hemorrhage, and it is in these older patients that hemorrhage is more liable to occur than in children.

Theoretically it would seem that a wound made with a wire would require more time to heal and would cause more pain in healing than a wound made with a knife. I have experimented upon this point by removing, in the same patient, one tonsil by the cold wire and the other tonsil by dissecting it out with a knife, and have been surprised to see that the wound made by the wire healed more quickly and with less pain than the wound made with the knife.

Hemorrhage after tonsil operations, while not very common, is still of sufficient importance to demand notice. From the literature, and theoretically, hemorrhage would seem to be confined to adults, and yet within the past year or so I have had four cases of troublesome hemorrhage following operations upon children under 8 years of age. I have never had, however, a troublesome hemorrhage from a snare wound. For the control of this hemorrhage I know of nothing so prompt and so pleasant as to take equal parts of tannic and gallic acid and mix them with water, making a mixture of the consistence of gruel. Draw this into a syringe and connect the syringe with a curved cannula, as a Eustachian catheter, for example. The bleeding wound can be easily located and is usually covered with a blood clot. Do not remove the clot, but introduce the cannula through the clot until the end of the cannula rests upon the bleeding wound at the deep surface of the clot. Then inject not above 10 to 20 minims

of the tanno-gallic acid mixture into the wound, underneath the clot, and gently remove the cannula so as not to disturb the clot. The clot thus holds the styptic in contact with the wound. The arrest of hemorrhage is often immediate and permanent. Too much of the astringent solution will displace the clot and so favor hemorrhage. In a few cases in which this mixture has failed I have substituted Monsel's solution and glycerine, 1-4, with immediate arrest of hemorrhage. In only one case have I ever found it necessary to make compression directly upon the bleeding tonsil, which I did with a Boettcher's Haemostat. The hemorrhage was immediately arrested.

DISCUSSION.

Dr. H. H. Martin, Savannah, Ga.—"This is a subject in which I am very much interested, one to which I have given considerable thought. I am very glad to hear this paper to-day, because in principle Dr. Wood's ideas agree with mine. In practice I differ very materially. I never take tonsils from young or old without using a general anaesthetic. I never operate in a sitting position. I prefer the prone position with the head extended over the head of the table. The anaesthetic I prefer is ether, because it is safer than any other anaesthetic I have used. I do nothing now but tonsillectomies, expecting to do complete eradication of tonsil tissue. Some times this is impossible, and you will, in spite of your endeavors, leave some tissue, particularly the apex. My method is extremely simple. My patient is anaesthetized with operator standing to the right. The mouth gag is placed in position. The adenoid is removed first. After the adenoid is removed, sometimes reanaesthetize the patient before beginning the tonsil operation. I then introduce the finger of the right hand and separate the tonsils from the tissue pillars. Beginning with the palate, I push the anterior pillar from the tonsil, passing over the apex and all around the tonsil. You can see the tonsil lying in the space, and nothing remains to be done but to seize the tonsil with the kind of instrument you wish to use. Slip the snare over the tonsil, and as it is brought down on the base of the tonsil, you can push your tongue compressor and draw the tonsil out. In a great many cases I complete the operation with the finger. I do not always use the snare. The snare which I now use, after having experimented with quite a number, is Dr. Curtis Eve's, of Philadelphia. It is one of the simplest and best I ever used. As for hemorrhages, I have never had many. They have always been in young children. Never had one in adults. If bleeding continues after operation, have the patient carried to bed, the feet should be lower than the head, the body at about an angle of forty-five degrees, so that the blood will gravitate from the upper to the lower part of the body. I deem it a good thing to get your patient a little quieted by a hypodermic of morphia.

Dr. Richmond McKinney, Memphis, Tenn.—"I do not think we are ever going to use the hand. In operating the technique that we adopt is largely individual, but certain it is we should not be satisfied with anything less than a tonsillectomy. Some use the tonsillotomy, especially to relieve adhesions. Certainly we must detach the adhesions, and the only way is to do a tonsillectomy. The snare should be used. I think a knife is very dangerous. You wound the anterior pillar much more with the knife than with the snare. They never think of doing a tonsillectomy in Europe. I remember reading an article by ———, of Vienna, in which he reported seven hundred or eight hundred tonsillotomies, and only one tonsillectomy. They do not think it necessary. I had a very severe case of tonsil hemorrhage. This was my first experience, and I hope it will be my last. I think the case would have stopped eventually, but he was bleeding very freely, and I thought best to suture the pillars. The position of the patient, of course, is a matter of choice. In Boston I have never seen them do anything but tonsillotomies. They have the patient in an upright position, and after operation tilt the patient forward to let the blood run out. They say they never have bad results."

Dr. E. C. Ellett, Memphis, Tenn.—"I agree with the gentlemen who have spoken in the discussion about tonsillectomy. Just to-day Dr. Cullom was making arrangements to do a tonsillectomy on a lady that I did tonsillotomy on sixteen years ago. She has had trouble for sixteen years. She would have been relieved, if I had done the right thing at first. In regard to the question of hemorrhage, I operate under an anaesthetic, as a rule. I prefer to use it with adults, and always use an anesthetic with children. Besides the anaesthetist, I have one assistant, usually a nurse. She sponges with long forceps with a round sponge on the end of it. I remove the tonsils, then put the patient under the influence of an anesthetic to remove the adenoids. I never let the patient leave the table until the hemorrhage has entirely ceased. I think possibly some lack of trouble that I have had is due to that. Now when I have to, I make use of pressure. No objection to pressure, that I know of, even for children. I do not attempt to stop bleeding with any drug. I have gotten into that technique, and I like it. The thing that I do invariably is never to let the child off the table until the hemorrhage is stopped; you have the family out of the way, which is a great help, and you can handle things under the most favorable circumstances."

Dr. G. E. Vaughan, Clarksville, Tenn.—"There seems to be the idea here that when a child comes to you about the tonsils, you should cut them out. I think different kinds of tonsils should be operated on differently. Sometimes it is a large tonsil, without inflammation or any history of it, that is obstructing the breathing. I do not see any reason in the world why you should use a complete tonsillectomy in a case like this. Tonsillotomy will answer the purpose. Where the patient has repeated attacks of tonsilitis, where the glands are enlarged in the

throat, I think the proper thing to do is a complete tonsillectomy, but in the other condition, I think a tonsillotomy is all that is needed. In regard to giving an anaesthetic to children in an upright position, I would say to those who advocate this position, that I wish they could have seen a little child that I saw in Chicago that had been anaesthetized with ether and was being operated on for adenoids, when the child stopped breathing and the operator had to supply artificial respiration for a minute or so, and carried the child out in the air. The head of the clinic finally ran his finger down the child's throat, and puled a large clot of blood out of the larynx. That is a very serious thing, and is likely to happen in an upright position. I think Dr. Martin's position of head over the table is an ideal position. Fatalities from cocaine I think are due from routine practice that comes in a large clinic, where patients are not properly considered as in private practice."

Dr. G. C. Savage, Nashville, Tenn.—"I see we have some old fogies besides myself. Allow me to say that when a parent comes to me for tonsil work and wants an anaesthetic, I unhesitatingly say to them, you must go somewhere else, if you want that done. I would not think of giving an anaesthetic for tonsillotomy or adenotomy. I never do it; but these patients usually return and have the operation done without an anaesthetic, and have always expressed their gratitude to me for not giving the anaesthetic. In the first place, it is not needed. If an anaesthetic kills only one in a thousand, you never know who that one is going to be. I have a tonsillotome that I had made in Vienna twenty-six years ago. It is Matthieu's tonsillotome. Up to that time there had never been a tonsillotome that did not have barbs on the fork. I said, 'Take these barbs off.' The disappearance of the barbs dates back to the tonsillotome made twenty-six years ago. I do not know what the tonsil is for. I believe we have shifted from removing a part of the tonsil to removing the whole without much excuse. I believe we ought to leave some of the tissue of the tonsil, when it is not all diseased. As to adenoids, I use Gradle's adenotome. I have used nothing else since it was invented. I am going to use it at five o'clock this afternoon. If there is bleeding from an adenoid operation, and there has been a general anaesthetic used, the child is going to swallow the blood, or it may run into the trachea. It is going to be very sick at the stomach if it swallows much blood. The parents will be worried if they see the blood come from the stomach. Let me, in closing, say, I would not think of anaesthetizing for a tonsillotomy. I certainly would not think of anaesthetizing a patient for adenoid operation."

Dr. O. Dulaney, Dyersburg, Tenn.—"It has been my experience, where any portion of the tonsil is left, that the part left can produce serious trouble. I think I have the case that Dr. Ellett referred to awhile ago. I believe if Dr. Ellett had removed the entire tonsil at that time the young lady would be in better condition than she is. When I saw her I treated her for laryngitis. She also had inflammation of the tonsil tissue which was left. I advised her to see Dr. Cullom and have him remove the rest of the tonsil. I have a patient that was referred to me by Dr. Hall, who had a tonsil removed two or three years ago. It was only partially removed. She has never gotten any relief, and claims she is in a worse condition than she was before. On account of her sister having died from tuberculosis a few months before, I had a microscopic examination made of the blood. She was very nervous. I removed the balance of the diseased tonsil, and she has gained twenty-five pounds. I am sure the portion of the tonsil left after the first operation was the whole cause of the trouble. My experience is, if you are going to remove a tonsil, get rid of it entirely."

Dr. Jno. Moore, Nashville, Tenn.—" I think it goes without saying that when a tonsil is to be operated on, it should be taken out as completely as possible. I think it is highly advisable to use a general anaesthetic in tonsillectomy, also in adenectomy. I think we are a little more inclined to be afraid of a general anesthetic than we should be. I have seen a great many patients operated on where it was almost the universal custom to use a general anaesthetic, and I have never seen any serious results from it, but this is a very small thing compared with the complete operation that we get from this method. I have always been a strong advocate of a general anaesthetic in doing a complete tonsillectomy and adenectomy, and often scrape the walls from which they are removed."

Dr. W. S. Dodson, Gallatin, Tenn.—"I agree in part with Dr. Savage, and as he has said, I too, may be considered an old fogy. I do not see why it is necessary to use a general anaesthetic on all cases to remove tonsils, even if a tonsillectomy is done. We can do a tonsillectomy and remove adenoids without a general anaesthetic at all. Of course some pain is produced, but the patient can soon leave the office, and there is no risk from the anaesthetic. The risk is not so great from the anaesthetic itself, as it is from the position that you have to use in giving the anaesthetic and the blood flowing into the trachea. Dr. Wood spoke of using the upright position and chloride of ethel as an anaesthetic. I saw one fatal case of tonsillectomy from ether anaesthesia. The patient was anaesthetized on the table in the usual way, and then was made to sit up. He died, I do not know from what cause. I see no reason for using an anaesthetic in old cases. I use a local anaesthetic, and I have never seen any bad results from it. In this I agree with Dr. Savage. When it comes to the tonsillotome, I have used various kinds. I never have used one successfully. I have never removed a tonsil with a tonsillotome that the patient did not come back for me to remove the stump with a knife. If we could all dissect the tonsil with the index finger, I do not believe we would have so much pain. We would not have so much hemorrhage. I try to remove the entire tonsil. So far as using Gradle's adenotome, I have had the same result as with the tonsillotome. There is a stump left which is necessary to be removed. I do not care if the parents are 'from Missouri,' it will leave a stump there. If you use Gradle's or any other, you have to go back and scrape off the remaining stump. It is just as easy to remove the adenoids as it is to remove the stump."

Dr. E. L. Roberts, Nashville, Tenn.—"I want to give just a little experience that I have had, which

is a little different from what has been given. This is not observation of my own work, but observation of the work of others. I have a certain line of work that gives me opportunity to see a great many patients that other men have operated on. When children are brought to me for the examination that I am to make, they frequently tell me before I look at their throat that their tonsils have been removed. If they do not tell me, I find it out sooner or later. I take just as much pains in examining the throat of a patient that has been operated on as I do one that has not been operated on. I see a great many patients that have been operated on by various men in this city, who do this line of work. I invariably ask the patient what the effect of the operation has been, so far as he knows. I also ask them how long since the operation was performed. My observation from the information thus given me is that tonsillotomy has given entire satisfaction as opposed to tonsillectomy, just as favorable results follow tonstillotomy as tonsillectomy. I am giving this from information gathered from the children, without any opinion of my own."

Dr. N. C. Steele, Chattanooga, Tenn.—"I suppose I am somewhat of an old fogy, as Dr. Savage has said. I was very glad to hear the last speech. I do not think all cases ought to be operated on just alike. I do not give an anaesthetic, if I can help it. One of the real reasons why I do not perform tonsillectomies is because a general anaesthetic is dangerous. I do a tonsillotomy first, and then if a tonsillectomy has to be done, a general anaesthetic can be given. I have operated for many years, and have only known of two cases where a tonsillectomy had to be done. I remember Dr. Miles, in the American Medical Association, after a free discussion, said he never had known of all of any tonsil removed. I do not think Dr. Savage is right about an adenoid operation not hurting. Two young men told me it was the most awful pain they ever experienced. As a rule I use the Gradle adenotome. The reason we do the tonsillotomy is because of the obstruction to breathing. If we remove enough to make free breathing, I do not think we ought to remove the adenoids. In many cases mild treatment continued for quite a little while will relieve these cases."

Dr. J. P. Crawford, Nashville, Tenn.—"The question as to an anaesthetic I think a very important one. I take this ground that unquestionably an adenoid operation is very painful. A great many of the cases that come to us for adenoid operations are nervous children, and I do not believe we are justified in operating on these nervous, undeveloped children without an anaesthetic. There is danger in a general anaesthetic. I say to them I have never had any trouble. I may have trouble with your child; I may not. I believe the majority of cases should be done under an anaesthetic. As to tonsillotomies, I believe in a great many cases, where there is just a simple enlargement, a tonsillotomy is all that is necessary. Where you have had considerable inflammation, time and again, the only thing to do is to take the tonsil out. I have done a number of tonsillotomies, and none of them have ever come back and reported any further trouble with the tonsils. Of course in adults from eighteen to twenty-years of age, where they have had trouble with the tonsil, they are liable to come back. I have a young lady now on whom I have done a tonsillotomy, and will have to also do a tonsillectomy."

Dr. M. M. Cullom, Nashville, Tenn.—"This question of an anaesthetic or no anaesthetic is one that we have differed on from time immemorial. We have never come to an agreement. I have always been an advocate of an anaesthetic. I was trained that way. I have seen many physicians operate on children under an anaesthetic in hospitals, and have never seen any bad results. Results always justified the practice. I never had the heart to take a child and hold it and do this operation on it, when a grown person would not submit in such a case. I operated on a child once, without a general anaesthetic, and I remarked how beautifully the child went through it. About three months after that, one of the family was in my office and said whenever they brought that child away from home and took it to a strange place, it would ask: "Is Dr. Cullom here?" That did not make me feel very comfortable. My practice is to give a general anaesthetic. Up to a few years ago I used the tonsillotome. I believe with Dr. Savage there are a great many cases where the tonsillotome can be used. Tonsils can be taken out and no trouble follow. We can never tell what these cases are, and my experience is that the man who does a tonsillectomy escapes the after effects that follow a tonsillotomy. I operate with the child lying on its back. I was taught the other way, and I cannot get over my awkwardness with the head hanging down. I operate with the child lying flat on its back. The bleeding and the embarrassment of the patient's respiration are questions. In fat patients the problem is a very difficult one. I had one patient, just a few weeks ago who had a very short, fat neck. Whenever I would open his mouth and put in the gag he would quit breathing. I simply had to stop and remove his tonsils with local anaesthesia."

SCIENTIFIC INFANT FEEDING.*

By MARGARET O. DAVIS, M.D.,
Nashville, Tenn.

Knowing as we do that from 20 to 26 per cent of all deaths occur under one year of age, and that this high infant mortality is not only a source of sorrow to the parents, but is a direct loss to the State, some municipalities are investigating the cause, and as the greatest mortality is found among bottle-fed babies, they are beginning to realize the necessity for having pure, clean milk to feed them.

It is well to always bear in mind the difference in human and cow's milk. The former contains of fat four parts, sugar 7, proteids 1.5, ash .15; while cow's contains of fat 2.35, sugar 4.4, proteids 3 to 4.5.

The proteids of human milk form softer curds, and is more easily digested; it is alkaline in reaction—cow's is acid. We must lessen the proteids and increase the fat and sugar in the cow's milk, and possibly add lime water to adapt it to the infant. To arrange the proportions, the cream and milk is taken separately. The milk is diluted, thus lessening proteids, and sugar is added according to Holt's formula in the form of sugar water, which represents an ounce of milk sugar to the pint, but for practical purposes cane sugar answers.

Every baby is a law unto itself, and must be treated individually.

There should be a half-dozen feeding bottles supplied, so as to use alternately. They should be kept clean by boiling in soda water, and the nipples should be boiled or sterilized in a saturated solution of boric acid.

Thrush is common in bottle-fed babies, and is due to a white parasitic fungi, the Oidium Albicans, and is caused by uncleanliness in feeding. For this disease the popular remedy is honey and borax. The borax alone in solution is effective. Bringing up "by hand" is a problem with delicate infants, while with those of a strong constitution it is usually simple, provided there is a good milk supply nearby and the environments are good. I will mention a case of an infant three months old relying entirely on the mother for nourishment with the addition of Nestles Food. It was losing in weight and each nursing and feeding was partly vomited after a half hour or so. The mother was very anemic. I advised weaning and feeding on the best dairy milk according to a simple formula, which she promptly did, varying as indicated. The change in diet was the end of the trouble. The environment of this baby was excellent; just the reverse of another case I have in mind where the infant was six months old, nursing an epileptic mother who was denied by poverty the food elements essential to her nutrition. She hailed me as I was driving by. She wanted some medicine for the baby which she had with her, and to inquire what was the matter with it. It was a horrible looking little specimen, indicating both malnutrition and inanition. I advised weaning and prescribed a cow. A kind neighbor loaned them one promptly. I heard no more of it until about three months later. I was driving by, and this time she brought it out to show me how well it was. She had some trouble in convincing me that it was the same baby.

An infant may be born with very little vital resistance, a poor constitution, we say, or its blood may become impoverished from erroneous diet, hygiene or illness. In these cases medical measures without correcting the diet and adopting it to the infant's capacity for assimilation and improving the hygienic surroundings is useless; but I regret to say there are physicians who prescribe calomel and cas-

*Read before the Section on Medicine of the Southern Medical Association, Nashville, Tenn., November 8-11, 1910.

tor oil, bismuth and pepsin mixtures for these little patients, with some directions as to feeding, casually as a side issue. It is in these cases, not only necessary to diagnose indigestion, but to determine whether it be caused by fat, sugar or proteids, and to modify the milk accordingly.

There are some few infants who have an idiosyncracy to cow's milk and cannot digest it at all, but they are rare. There are others who can assimilate very little or no fat.

Vomiting, if persistent, indicates either faulty hygiene, excessive fat, or pyloric stenosis. By observation of the vomited matter, the time it occurs, and the other symptoms associated with it, a correct diagnosis is usually not difficult. Just here I mention lavage of the stomach as being most helpful and easily done, though too often neglected entirely.

Sour vomiting, an hour or an hour and a half after meals, and when the stools are frequently green, greasy and acid, containing lumps of undigested fat, we can nearly enough for practical purposes approximate the infant's ability to digest fats.

It is better to begin with a low per cent, 1-1-5, and gradually increase to suit the infant's capacity as its ability to digest fats increase. Pancreating the formula is useful in certain cases, but should not be continued long, for, as is well known, an organ which has its work done for it, soon becomes lazy and refuses to work, or does so inefficiently.

The babies who cannot digest fat in any form must be fed on skim milk, from which all of the fat has been removed, or fresh buttermilk, to which is added cooked wheat flour and sugar. The indigestion caused by the proteids of the cow's milk is often troublesome. The infant suffers with colic, the stools are dry, hard and white, or curded, green and slimy. It should be given a purgative dose of castor oil, followed by whey feeding for a few days.

When the milk is resumed, it may be pancreatized for a short time. One or two grains of sodium citrate for every ounce of milk and cream renders the curd easier of digestion in many cases.

Jacobis' early teachings, in which he uses cereal decoctions, still holds good, and has been recently emphasized by Chapin, who uses dextrinized gruels; ordinarily barley-water made from the grain is preferred, or if constipation is present, oatmeal water.

Sugar rarely causes trouble, but if it does, the stools will be frequent, watery and very acid, associated with sour, watery vomiting, flatulency and colic.

Vomiting is often caused by the stomach simply running over. After five days it holds 6¼ drachms, its capacity doubling at four weeks and trebling at eight weeks. So small amounts are given the first two weeks at two-hour intervals, then every three hours until the end of the second month, and from that time on until the end of the seventh month, every three or four hours.

After an infant is three months old, nursing or feeding between 10 p. m. and 6 or 7 a. m. is not allowable. The stomach should be completely at rest; if not, indigestion with the accompanying flatulence, colics and irritability results.

No acute intestinal disorder should be neglected during the period of dentition any more than at any other time.

It is a natural process, although the nervous system is peculiarly liable to storms at this age.

Many deaths result from mothers regarding diarrhoea to a certain extent normal at this period. How often our fatal cases of cholera infantum give a history of such neglect. All that science can do is done at the last, but it availeth nothing more than to console the bereaved ones, who believe now that everything was done that could be done.

The badly nourished infant is an easy prey for any wandering microbe that may come its way, hence the pneumococci and the

tubercle bacilli claim many of them in the winter months, while the well-fed baby supplied with abundance of oxygen is practically immune. Its blood is rich in opsonins in ammunition. If a bacillus gains entrance, it is promptly massacred.

Human milk under normal conditions is the ideal food for the infant, and no artificial feeding can compare favorably with it. It is nature's food.

It almost immunizes the infant to all infections, but there are many cases, such as tubercular, syphilitic, nervous and poorly nourished laboring women, where recourse must be had to artificial feeding, and as cow's milk, properly modified, is the best food, too much care cannot be taken in its production. There should be a law in this State and inspectors appointed to compel the dairyman to furnish absolutely clean milk to the consumer. We could well afford to pay the increased cost that this would cause, as we would more than save the amount on our doctor's bill. *Let us have certified milk.*

The glandular troubles of children are no doubt largely due to the drinking of tuberculous milk.

The summer diarrheal diseases, which kills one-third under two years of age in the cities, can be prevented by strict application of good sanitary laws in regard to milk.

To improve the milk supply means a reduction in infant mortality.

DISCUSSION.

Dr. Snyder, Birmingham.—"I think the doctor had a great many valuable points in the paper, not only in regard to infant feeding, but in that we should have a greater number of certified milk depots. This can be established by hard work, the public should be soon trained to demand such a thing, and the purified milk would find easy disposition. The people are willing to pay for milk that is clean and pure. In Birmingham we have just recently had stations that are able to supply purified products of the dairies, and I hope they will keep them up. It has required some hardship on the part of a few of us, more so on acount of educating the milkman. The hardest part of all is educating the milkers. The man who is contemplating the establishment of such a service is going to find it hard to find laborers who will keep things sanitary. I am glad to have listened to the doctor's paper, and hope we will hear from her next year."

A UNIQUE CASE OF ELEPHANTIASIS CAUSED BY THE STREPTOCOCCUS ERYSIPELATOUS, ASSOCIATED WITH THE BACILLUS PRODIGIOSUS.*

By W. M. McCABE,
Superintendent and Surgeon, City Hospital,
Nashville, Tenn.

A mulatto woman, native of Rutherford County, Tennessee, twenty-three years of age, cook by occupation, entered the City Hospital, September 19, 1907, in the service of Dr. John A. Witherspoon, and was seen by Dr. W. C. Dixon and myself. For the past ten years she had resided in Nashville, but was never out of the State.

Her father died at 54 years of age and one year prior to his death his legs became oedematous and were tapped. Paternal and maternal grandfathers gave a negative history, but the maternal grandmother had enlarged limbs, which were diagnosed white swelling and milk legs. No history of venereal disease could be obtained.

The patient's lower limbs were enlarged from childhood, and on repeated occasions she was compelled to go to bed because of severe pain in the limbs and fever. At each evascerbation the legs would enlarge and remain somewhat larger than they were previously. In June, 1906, she was seen my Dr. J. H. Hale, colored, and he described to Dr. Dixon and

*Read before the Section on Medicine of the Southern Medical Association, Nashville, Tenn., November 8-10, 1910.

me a condition almost identical to that presented by the patient upon her entrance into the hospital. At this time he opened an abscess on the left knee which discharged freely and healed in six weeks. He had treated her on several occasions for "acute dyspepsia."

She was brought to the hospital in a delirious condition. The temperature ranged from 100 to 104 degrees F.; the pulse was 120 to 140 and very weak; the tongue was heavily coated and the breath was sweetish; the facies were intensely septic and the bladder and bowels acted involuntarily. The urine contained albumen and casts.

On physical examination the heart and lungs were normal. Over the front of the chest the lymph channels were inflamed and

A Unique Case of Elephantiasis Produced by the Streptococcus and Bacillus Prodigiosus.

reddened. They could be easily traced. The abdomen was flat, not rigid, and showed the little red lines indicative of inflamed lymph channels coursing across it; the abdominal viscera were normal in outline. Both legs were enormously enlarged (the left, the larger), brawny but not pitting to pressure.

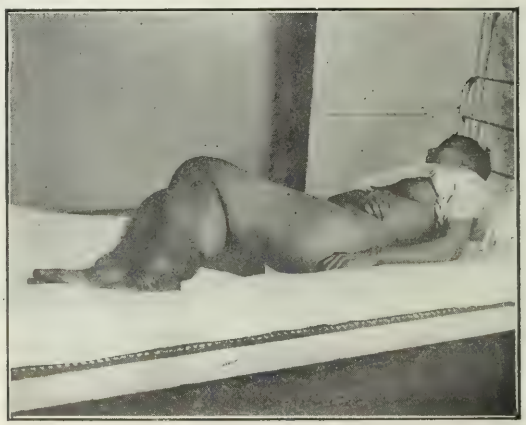
The skin was very thick, dark, leathery to the touch, and reminded one very much of elephant hide. Various blebs were present, and one, especially large, existed upon the left hip. There was a distinct line of demarkation at the iliac crests, and the tissues above this point were normal except for the red lines coursing along the lymph channels.

From all appearances the condition was one of true elephantiasis, but a thorough examination of the blood failed to detect the filaria.

Blood and serum cultures were made by Dr. Wm. Litterer, and I hereby append his report:

"Blood cultures from the above case reveal the streptococcus pyogenes in pure culture, which prove to be quite virulent, killing mice in eighteen hours.

Cultures were also made from the blebs from four different places, namely: from the foot, the leg, the right and left hip. All contained the streptococcus pyogenes and the



A Unique Case of Elephantiasis Produced by the Streptococcus and Bacillus Prodigiosus.

bacillus prodigiosus, the former predominating. It was some time before we could convince ourselves that we were dealing with the bacillus prodigiosus in view of the fact that it is a non-pathogenic organism. The possibility of its presence can, however, be explained by the microbic association with the streptococcus pyogenes, which undoubtedly exists to a great extent (as shown by Coley's fluid for inoperable sarcoma). We do not believe this to be a contamination, for the reason that different culture media were used and all the

blebs showed the same organism. The cultural and tinctorial characteristics of the above organism responded to the classical description.

From the bacteriological point of view there are two extremely unique features that stand out prominently. The first one is the extreme rarity of the findings of the streptococcus pyogenes in the blood in cases of erysipelas (which we take this to be). Only a few cases, even those that are fatal, have ever been reported. The second feature is the presence of the bacillus prodigiosus, a non-pathogenic bacterium, associated with the streptococcus pyogenes in the living tissues, which marks this case, so far as we know, as unparalleled in the annals of bacteriology.

The patient died the day following her entrance to the hospital, and we are extremely sorry that an autopsy was not permitted.

DR. TOM WILLIAMS ON SUGGESTION.

(The following from a paper by Dr. Tom Williams, the well-known neurologist of Washington, D. C., tells important truths.)

The dream of bears in pursuit told by the sufferer repeatedly to other children, is in the first instance of physical origin, from mince pie at supper, while the shivering terrors with heads under bedclothes, suffered night after night by the children to whom he told his dream with exaggerations is a matter of suggestion. This is a useful differentiation. In his paper Dr. Williams mentions several cases of suggestion.

A girl who thought she could not eat was taught that she could.

Only a few days ago the writer received a note of heartfelt thanks from a mother whose boy, a fine little fellow of four years, waked every night screaming with terror, knowing no one and fighting her desperately in his efforts to escape. It was noticed that each time it occurred he wet the bed. A nurse was appointed to watch him all night. His drinking fluids were somewhat restricted after 3 o'clock p. m. The nurse was instructed to see that he lay in a comfortable position while asleep, and that this position was changed every hour, but without waking him if possible. Two hours after going to sleep he was to be roused and urged to micturate. Two hours later the same procedure was ordered. Moreover, when he showed, while asleep, any tendency to restlessness, such as jerking, or starting, he was to be turned to a different position, and if the nervousness continued he was to be awakened by gently talking to him, stroking his hair, etc., so that the wakening would be gradual. With these simple measures alone he entirely recovered in a few weeks and had remained so for two months. Only the bed wetting was obstinate, and this yielded to three grains of bromide of potassium, ten drops of Fl. Ext. Rhus Aromatica and five drops of Tr. Hyosayamus in a teaspoonful of Aromatic elixir three times a day.

The paper read by Dr. Williams is so timely, so sensible, and so forcibly appeals to common sense that the writer considers any time occupied in its analysis well spent, for as some one has remarked, "Common sense is the God of medicine" (or should be).

SPIROCHETAE.—Microscope enthusiasts who seek, and think they find, the *spirocheta pallida* in suspected tissues, should not fail to remember that not every spirocheta is the *treponema pallidum*, or specific microorganism of syphilis. There are others, mostly innocuous, and the difference between pallida and the others resides in variations of motility, number of spiral turns and thickness of body. Such being the case, too much care in their differentiation cannot be exercised. Errors, however, are probably more possible than really apt to occur.

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Next Meeting Hattiesburg, Miss., November 11-13, 1911.

"Be Good and You'll Be Happy."

That is what our Sunday school teachers used to inculcate long years ago. It is to be hoped they do so yet.

Cynical men and women of the world laughed at the motto and referred to the fortunate ones who were anything else but good. Nevertheless once in a while what seems like a sacrifice for the sake of principle turns out to be a good business proposition.

Last summer and autumn the editors of this journal were publishing the Gulf States Journal of Medicine and Surgery, afterwards colsolidated with the Southern Medical Journal, and now operating under that title. They felt that as exponents of medical thought it was their duty to do something towards rescuing the profession from its rapidly increasing dependence upon proprietary medicines for their therapeutic ideas and materials.

Together with many others they felt that it would be a titanic struggle that could loosen the grip which the great proprietary medicine houses, backed by almost limitless capital, had obtained upon the doctors everywhere. There was not a doctor's office, from the pine shanty in the backwoods to the handsomely furnished suite in a skyscraper, where the traveling salesman did not leave his samples and his "literature." Their preposterous claims were cloaked in the terms of pharmacy and the symbols of chemistry. Some of their preparations were compounded on useful prescriptions which every doctor ought to be able to originate. But prescription writing was becoming a lost art.

The great congress of doctors, the American Medical Association, had sounded the alarm, had organized its forces for attack, and the Southern Medical Association, of which the Gulf States Journal was the official organ, heartily endorsed its action. The editors of the *then* Gulf States Journal took account of the business from every point of view, to see what it would cost them to come out on the side of decency. They realized

that it would not do to tell the truth about proprietary medicines in the literary pages, to urge every doctor to shun their use and throw off their chains, and at the same time accept the money of those identical manufacturers for space in which to publish their often extravagant advertisements.

Hence if they took up arms with the insurgents against the proprietary medicine evil, and decided to stand by the A. M. A. and the S. M. A. through thick and thin, they would have to refuse to accept or renew any contract to advertise a proprietary remedy unless it had been accepted by the Council on Pharmacy and Chemistry and listed in its "New and Non-Official Remedies."

They scanned their advertising pages, to see how many advertisements they would be obliged to lose. They were dismayed to find that THIRTY-FOUR ADVERTISEMENTS, occupying altogether *sixteen pages*, would have to be declined as rapidly as their contracts expired, in addition to much new business that was offered. It would leave them only twelve pages of paying advertisements. Every one of these barred advertisers contracted for twelve months at a time. At two hundred dollars a page the amount thus "thrown away," and that is what one business adviser called it, would be $3,200 a year. The only way they could figure out a working plan included the acquisition of the only other medical journal which was really in competition with them on the same high ground they were considering. They must assume new and heavy responsibilities and at the same time accept loss of the good will and financial support of two-thirds of their former patrons.

They proceeded to do so. The Gulf States sent notice to all its advertisers announcing the stand it would take. They meant what they said, and though now operating under another name, the Journal will, in this issue, for the first time in the history of any medical journal in the South, present to its readers a medical periodical absolutely free from the taint of advertising any drug or medicine that is not favorably recognized by the U. S. Pharmacopeia, the National Formulary, or New and Non-Official Remedies of the A. M. A. Council. None but reasons of the utmost gravity can persuade busy men thus to labor hard and face apparently inevitable monetary loss.

Some of these reasons have been stated in this and previous issues of the Journal. But in the opinion of the editors they have never been as well expressed by any other man as they were by Dr. George H. Simmons in his "Oration Before the Medical and Chilurgical Faculty of Maryland," April 24, 1907, and published in the A. M. A. Journal in the issue of May 18 in the same year.

Among the original articles appearing in another part of this number of the Southern Medical Journal will be found certain space devoted to a reproduction of liberal excerpts from that fine address. We take pleasure in heartily endorsing all that is said therein. Every doctor who wishes a clearer understanding of the motives and necessities which are actuating this effort of the medical profession to get away from ready-made treatments and back to ethical therapeutics should read that address.

"Well," you may be thinking, "how about that 'good and happy' motto at the head of this article?"

This is how. Our friends, the leading physicians in the country, approving the stand we take and our absolute fulfilment of our declarations, have, with their essays and articles, enabled us to make *the best monthly medical journal in America.* One enthusiastic subscriber sent in his check for amount due and wrote across the end of the bill, which he returned for receipting, these cheering words: *"Best on Earth."*

If they had done it themselves, the editors would not boast, being modest men. But it is you, kind friends, whose generous support gives them a great, big, paid-up subscription list. It is you, oh, ye able writers, whose

names are known wherever medicine is read in the English tongue; it is the magic of your names that attracts subscribers, just as those editors thought would be the case; for you could not fail to come to the rescue of those fighting such a desperate battle for the principles you advocate. It is you, wise advertisers, who are helping to purge the realm of therapeutics by furnishing ethical preparations and proclaiming their virtues through the Southern Medical Journal; for you know the class of men who write for it, and the value of being found in such good company. And the result is that though they threw away three thousand dollars worth of advertising, more than was refused admission to the advertising pages has since been supplied by wise and ethical advertisers.

That is where the "happy" comes in. And they are proud, too, proud of their success, proud of their journal.

Are not you, also? *For it is you who have done it.*

The Value of Illustrations

We do not always stop to think how a thing is done while we are enjoying it. So it is with the average doctor when he reads his Journal and absorbs in a few moments the knowledge and theory of technique that some pains-taking, scientific operator has spent months in elaborating and perfecting. There it is all spread out before him, the text made so clear by the illustrations as to render unnecessary any opportunity to see the operation done in an amphitheater. It is better than an amphitheater.

He does not have to catch the swift changes as they pass, or else lose them utterly. Section by section, stitch by stitch, he can observe it at his leisure, as though the expert operator were to stay his hand at the reader's bidding, and await his complete understanding of each step before proceeding to the next. It has been the case that the delicate shades of color that characterize certain tissues or substances were not found in the illustrations; but any reader who will turn to page 794 of the A. M. A. Journal, issued March 18 of the present year, will have to confess that no diagnostic tint, however delicate, could escape the artistic work that produced those startlingly realistic pictures of mammary cancer and its discharges. Shape, texture and tint are perfect. Only the sense of touch remains to be added to make the page a real clinic.

No representation can with entire adequacy supplant the prepared specimen derived directly from the part diseased, yet unless that specimen is prepared and preserved far more perfectly and artistically than many that are used in teaching, such pictures as these in the A. M. A. Journal will give a truer idea of some of the elements of the disease than can the actual specimen itself. The development of photo-engraving under several different systems and names is one of the most wonderful advances in pictorial art ever accomplished. It places within the reach of people of restricted means such copies of beautiful objects in art or nature as could only be procured after much expenditure a generation ago.

But to the physician the facility it affords for registering and transmitting the most delicate shades and tints of tissues in health or in disease, and the most minute details in delicate operations, forms the most valuable attribute of the advance in art. Medical journals will cost more to their publishers, but they will be worth more to their subscribers, and that is the criterion to which all worthy periodicals aspire.

The Ultimate Object

He is lacking in discernment who does not perceive that the trend of medical thought and effort is along lines that would end in the annihilation of all diseases the causes of which are living organisms, whether of a fungoid or vegetable nature, like the germs of diphtheria, typhoid fever and cholera, or of animal character like the spirocheta pal-

lida of syphilis and the plasmodium of malaria.

Concerning one and all of them one fundamental principle prevails, namely, communication by infection. If there were no depots of infection there would be none of those diseases. Where are those depots? Unquestionably they are the bodies of infected persons. Cure the syphilitic cases of a region, so that not an infected animal exists therein, and there will be no more cases of syphilis there until it is brought in from the outside.

While there remains one person infected with syphilis there will always be a depot of infection whence it can be distributed all over the world. The organism causing syphilis is a zoophyte, or member of the animal kingdom. No disease caused by a micro-organism of animal nature is self limiting. It may oscillate between better and worse, but it never gets well without the intervention of some therapeutic antidote or physiological cataclysm. But diseases caused by such animal organisms are generally within the reach of some protoplasmic poison which can be used in a strength fatal to the parasites, but not to the physiological cells of mammals. Such are the relations of quinine and the plasmodium malariae; salvarsan and the spirocheta pallida, and possibly also in trypanosomiasis and spirillosis in general. The hope now dimly shining on the horizon of the future is that at some time, not too far away, the law of the land will no longer allow a human being to serve as a depot for the preservation and distribution of the spirochetae, but will compel infected subjects to submit to curative treatment. Unfortunately, however, no one treatment has proven a certain cure, but there is no denying the fact that therapeutic knowledge is making rapid strides in that direction. Malarial infection, however, can be annihilated. We have a specific for that, and the time will come when the law will compel its carriers to be disinfected. But the diseases caused by bacilli, which are all of vegetable nature, have, as a rule, a different history. The disturbance they occasion is accomplished by poisons they manufacture in the system, just as toadstools outside of the system and growing on a lawn manufacture poisons.

A fundamental difference between diseases like malaria, caused by animal micro-organisms, and diseases like influenza, caused by vegetable micro-organisms, is that one class of diseases is self limiting and the other is not. Every body knows that a person ill with influenza, diphtheria, or typhoid fever, will, unless fatally infected, get well after a while, with or without medical treatment. But people with syphilis or malaria seldom recover without therapeutic interference.

Often they carry the germs in their systems for months though the symptoms their activity would cause lie dormant; but the microscope would reveal the presence of millions, ready to be distributed each in a manner according to its kind, or to light up again fiercely the fires of disease in the system of their host. But in the sufferer from infection with germs of vegetable nature, say the bacilli of typhoid, in many mases nature, without medical aid, will cause the system to generate an antidote to their poison so that the symptoms disappear while yet the patient's excretions swarm with enough bacilli to infect a whole city. He is unconsciously a menace to the community. The germs still live, but they cannot poison him.

As "all roads lead to Rome," so all logical considerations of the characteristics of diseases caused by germs lead to antisepsis. Therefore, as:

1. All germ diseases are conveyed from germ bearers to the uninfected.

2. There are methods of learning with almost absolute certainty whether a person who has recently been infected with pathogenic bacilli or protozoa is perfectly disinfected therefrom, internally and externally, and if such is not the case, that person is a depot of infection and a public menace.

3. Infectious diseases should be quaran-

tined, isolated, kept apart from and out of reach of uninfected persons, whether those infectious diseases are stored in food, drink, clothing, domiciles or the systems of individuals.

4. To whichever of the above classes the depot of infection belongs, public safety demands that it remain in isolation until it has been disinfected by proper treatment. The necessity is a public need, the duty a public one, and the public should bear the expense. When the time shall come that this measure is honestly and rigidly carried out, the ultimate object of medical research will have been accomplished. Then will begin an era when vaccinations and antitoxins will no longer be needed, for the germs that caused their necessity will no longer exist. Dreams! Dreams! Yet every good measure ever accomplished lived first in the brain of some dreamer.

Line Upon Line

At the risk of being thought too much devoted to the cause of veratrum viride, now threatened with exclusion from the U. S. Pharmacopoeia, we invite the attention of our readers to an article that ought forever to settle the question of its usefulness in the mind of every unbiased student of therapeutics. The article is a condensed clinical review of ninety cases of puerperal eclampsia and the treatment employed.

It was read at the "Twenty-third Annual Meeting of the American Association of Obstetricians and Gynecologists, held at Syracuse, September 20-22, 1910," by E. Gustav Zinke, M. D., Chief of the Out-door Clinic and head of the Obstetric Department of the University of Cincinnati, Ohio, and published in the American Journal of Obstetrics and Diseases of Women and Children, for February, 1911.

A condensed analysis of this forceful and unanswerable paper may be stated as follows: From 1875 to 1903, a period of twenty-eight years, he treated, counting private and hospital or dispensary patients together, sixty-four cases of puerperal eclampsia, including all known varieties and stages of the disease. His treatment up to 1903 was what might be called the orthodox treatment, consisting of inhalation of chloroform during the attacks, catharsis as soon as possible, hot packs, hot baths and chloral per rectum. Also venesection in two cases and morphia in large doses in one case, emptying uterus, etc. Sometimes small doses of Norwood's tincture of veratrum were given, "but never in the large doses recommended fifty years ago by Baker, and since then by Reamy and others." Results: Maternal mortality of the *antepartum* convulsions, 45 per cent. Maternal mortality, intrapartum convulsions, 28.75 per cent. Maternal mortality postpartum convulsions, 50 per cent. Total maternal mortality, 34.37 per cent. Foetal mortality, 45 per cent.

Since 1903, a period of seven years, twenty-six cases of puerperal convulsions were treated.

The treatment was uniformly as follows: The moderate use of hot baths, hot packs, strict milk diet, "and free but not exhaustive catharsis." "In every case, no matter how many convulsions the patient had had, 20 drops of Norwood's tincture of veratrum viride were given hypodermically and repeated every hour until the patient's pulse was reduced to 60 a minute. *When the pulse showed a tendency to rise again* another dose of from 10 to 15 drops was administered, and repeated every hour until the pulse was again down to 60 or below."

Some cases required three 20-drop doses to conquer the pulse and convulsions. On the other hand, "in one case after 15 convulsions, another after 11 and a third after 9, one dose of 20 drops was sufficient to bring the pulse down to 60. In neither of these three cases did the convulsions return, though smaller doses were repeated to hold the pulse down."

Now for the results. Of the twenty-six cases only four were lost.

Of these four two were "moribund when first seen by the writer," one of them dying of hemorrhage and shock following "a violent and protracted attempt at delivery by a colleague of good repute," the other from shock of Caesarian section after receiving 1¾ grains of morphine hypodermically, besides a liberal use of chloroform. The third died of septic infection one week after the ninth and last convulsion. The fourth died after one long convulsion, apparently of cerebral hemorrhage.

The remaining twenty-two patients recovered. The foetal mortality was slightly larger than in the other series of cases, namely, 50 per cent. No comment, however eloquent, could speak more forcibly against the folly of teaching that vetratrum and aconite are identical in their therapeutic applications and effects. The paper of Dr. Zinke mentions also eighteen cases in the practice of Dr. Wm. Gillespie, of Cincinnati, treated in a similar manner, all recovering.

Now, gentle reader, watch the new editions of the text books on Materia Medica and Therapeutics as they roll from the presses, and see with what sublime indifference many of them will ignore such a demonstration as this.

Where Will It End?

Sometimes, when thoughtfully considering the ever growing curriculum of studies which must be, or are supposed to be, mastered before a medical student can win his diploma of M. D., one wonders how any boy who has reached years of discretion can have the courage to begin the study of medicine. The subjects specified became so numerous a few years ago that another year was added to the time allotted for their mastery, and two additional months out of every twelve were devoted to the curriculum, amounting to still another scholastic year. But already four years of eight months each, spent in the medical school, have failed to accommodate the ever growing curriculum, and some schools are requiring five years of medical study before granting a diploma. But the end is not yet. In the A. M. A. Journal's London letter dated February 14, the correspondent tells us that in England five years has proven too short a time, and that six and a half or seven years are needed to complete the curriculum.

Thus for the past twenty years the pendulum has been swinging in one direction. There are few indications that it has reached the limit of its arc. Still there must be a stopping place. No more is required of the medical student than it would be useful for him to know and all the better for his future patients. But there must be a limit somewhere. Then,too, compare the probabilities that beckon to the medical student with those of the law, and the mental preparation demanded of each.

At present the effort is to teach every student all of everything that is known pertaining to medicine and surgery. But as time passes and knowledge grows the whole material universe becomes more and more closely related to the welfare of man; *and no one can know everything.* Where will it end?

A Suggestion

Modern pharmacology is full of suggestiveness.

Recently an undergraduate in a school of medicine, who is in the laboratory stage of pharmacology, placed in the quiz box the following question:

"Certain German manufacturing chemists are publishing a statement that serum from horses saturated with Pollantin, the toxin derived from ragweed, acts as an antidote to the hay fever caused by the pollen of that plant. If this is true, why should not an animal which was gradually saturated with ascending doses of morphine afford a serum that would act as an antitoxin in cases of acute morphine poisoning?"

The suggestion, whether practical or not, was certainly along the lines of mdoern investigations in pharmacology. It would be

very convenient to have a sure antidote, put up in hermetically sealed, ready to use glass syringes, each containing a certain number of units for antidoting specified stages or degrees of poisoning. The long vigil, the laborious efforts to prevent coma, the artificial respiration, all banished by a glass tube full of serum and a fine, sharp needle ready for penetrating some convenient vein. Of course it all sounds absurd. But so did diphtheria antitoxin seem an absurdity to Virchow.

A Wise Liberality

It is a most encouraging indication of intelligent forethought when a state devotes the largest part of its income to the education of its children; and it is still more cheering when its legislators rise above the sordid principles of the professional politician and liberally support its higher institutions of learning.

The legislature of Alabama which has just adjourned *sine die,* and the one which four years ago preceded it, appropriated more liberally for the above mentioned purposes than had ever been done before in the history of the state. Physicians everywhere will rejoice with those of Alabama over the way the state has taken care of the medical department of its university. Both legislatures gave liberal sums to that department in addition to the large amounts appropriated to the main university, the present instance being "one hundred thousand dollars for maintenance."

With this support in addition to its former income the School of Medicine of the University of Alabama owes it to the citizens who have so liberally endowed it that it shall become the leading school of medicine in a range of territory embracing all of the southern and many of the middle states. Liberal appropriations were also made to all the other schools of every kind and variety. A people who invest the money of their commonwealth in the brains of its citizens do indeed lay up money where neither corporations nor syndicates can corrupt nor banks break and steal it.

All As It Should Be

Plant City, Fla., must be a medical paradise, judging from the expressions of Dr. J. W. Alsobrook, of that place. Recently he read a paper entitled "Surgery Outside of the Hospital" before the section on surgery of the Southern Medical Association. In that paper he urges doctors to perform most of their surgical operations themselves and at home, calling upon the neighboring physicians to assist them.

He says: "We never get too busy or tired to help the other fellow when he has an operation: each is the other's personal friend and his trusted assistant and confidant. We have truly a medical fraternity in this little country town."

Some doctor in that town has the peculiar form of public spirit that attracts the good will of his fellows.

It is safe to assume that most of them attend their medical society regularly, prepared to do their share of the work. This inspires the members with that spirit of mutual helpfulness which insures the welfare of their patients and the prosperity of themselves.

This is all as it should be.

"Thou Shalt Not Kill"

is a command as imperative against an assault with a deadly bacillus as with a club. He who wilfully and consciously scatters the germs of the infection of consumption, diphtheria, smallpox, measles or other dangerous disease along the streets and in street cars and public halls is as guilty as one who carelessly scatters dynamite cartridges along a highway in the darkness, regardless of who may suffer therefrom.

"Thou shalt not kill."

Words of Encouragement

The Journal cannot spare much space for self-congratulation, but it feels that perhaps some of its reader-friends would like to see what others of its reader-friends think of it.

So from time to time a few of the many complimentary letters received are presented for public view.

Friends who have written us in similar vein must not imagine that we do not appreciate their letters because they have not been published.

Sooner or later we hope to print them all. We take this opportunity to thank every friend who has written the Journal "encouraging" words. The fact that many of them accompany remittances for subscriptions adds to their significance.

They are more highly appreciated than we can express. They are like dew upon the petals of an opening flower, adding to the vigor derived from mother earth a stimulation that could only come from a benison from above. Below we present a few of the letters taken at random from the "Encouragement File." Some are of early and some of recent date, but all are alive with the spirit of approving friendship.

For such expressions our appetite is voracious. More, please!

EVERGREEN, ALA., Dec. 22, 1910.—*Editors Journal*: I have just finished reading the last number of the Southern Medical Journal, and there is nothing that gives me more pleasure than to know that you have succeeded in accomplishing the consolidation of the two leading medical journals in the South.

There must be some "power behind the throne." I am sure that there can be nothing but success for the Journal with such men at the head of it. . . . Sincerely,

E. M. STALLWORTH.

MARIANNA, ARK., Dec. 23, 1910.—*Editors Journal*: I have just received the Southern Medical Journal and cannot compliment you too highly on its make-up. It certainly deserves to rank up with the highest in the land. Sincerely, WILLIAM H. DEADERICK.

BIRMINGHAM, ALA., Dec. 26, 1910.—*Editors Journal*: I am greatly pleased with the Journal, and heartily congratulate you upon the good work you are doing.

I believe it will be a great aid in building up the Southern Medical Association, which, by the way, we want to make a powerful organization here in the South. When I ask a friend to become a member of the Southern Medical Association I feel that I have something to offer him that is substantial in return. I am especially pleased with the report of the discussions of the Nashville meeting. They were very full and accurate. . . . Sincerely, H. EUGENE MITCHELL.

FLORENCE, ALA., Feb. 12, 1911.—*Editors Journal*: It gives me pleasure to be a helper in the good work you gentlemen are trying to accomplish. I wish you all possible success, and believe that the entire profession, North as well as South, will take the same view of the situation as you do.

I wish to commend your editor-in-chief personally for the effort he is making to draw attention to the possibility of eradicating malaria. It is the greatest detriment to general healthfulness and the principal obstacle to Southern prosperity. . . . Very truly yours, CHAS. M. WATSON.

CLARKSVILLE, TENN., April 7, 1911.—*Editors Journal*: . . . Since its inception the Journal has been very fortunate in having as its editors men who know what is needed by the general practitioner, and discriminate between wheat and chaff, publishing facts, not fancies. It is far more helpful than the ——— Journal and other elaborate publications, which are all right in their way, but do not appeal to one in active practice. I am glad you eliminate—almost—professional advertising in the guise of articles published, not so much to advance the art of medicine as to advertise the writer.

I can usually find many times the value of a whole year's subscription in each number. All of which meets the approval of Yours truly, C. G. WILSON.

OBITUARY

Dr. William Warren Potter, editor of the Buffalo Medical Journal, died at Buffalo, N. Y., on Tuesday, March 14, 1911, after an illness of a few weeks, aged 72 years.

Dr. Potter's life was one of activity and his high professional attainments made him prominent in the fields of medicine, surgery and literature, and the influence of his personality on medical literature will be a lasting one. His career was foreshadowed as to its success and the line of achievement by his lineage, since his father, his grandfather, and his greatgrandfather, not to mention collateral issue, were all distinguished physicians.

William Warren Potter was born at Strykersville, N. Y., December 31, 1838, and was the son of Dr. Linhorf and Mary-Green (Blanchard) Potter. His academic education was received at Arcade Seminary, N. Y., and at Genesee Seminary and College, Lima, N. Y. He then entered the medical department of the University of Buffalo from which he received his degree in 1859. Upon the completion of his medical studies he formed a partnership with his uncle, Dr. Milton E. Potter, of Cowlesville, N. Y., and began the practice of medicine.

One of the most valuable services rendered by Dr. Potter to the medical profession was his participation in the struggle for the establishment of the New York State Medical Examining Board. During those days of factional opposition, Dr. Potter spent much time at Albany, lending his aid in favor of the bill which was finally passed by the legislature, signed by the Governor, and went into effect September 1, 1891, serving as the basis of the present system of state medical examination. Dr. Potter was appointed examiner in obstetrics and gynecology of the board, and since 1897 has also been president.

Dr. Potter was a member of the American Medical Association (chairman of the Section of Diseases of Women, 1890); Medical Society State of New York (president, 1891); Medical Society County of Erie (president, 1893); Buffalo Medical and Surgical Association (president, 1886); Buffalo Obstetrical Society, 1884-1886; president Section of Gynecology and Abdominal Surgery, First Pan-American Medical Congress, 1893; president of the National Confederation of Medical Examining and Licensing Boards, 1895-1899; secretary of the American Association of Obstetricians and Gynecologists since 1888, examiner in obstetrics and gynecology, New York State Board of Medical Examiners, and president since 1897.

BOOK REVIEWS

PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY. By Charles B. Slade, M.D., Instructor in Physical Diagnosis, University and Bellevue Hospital Medical College, New York. Illustrated. Philadelphia and London. W. B. Saunders Company. $1.25 net.

This modest little book contains in its 146 pages a mine of practical information of great value. It is intended to teach students of medicine who have eyes, ears and sensitive fingers to use them in examining *well people!*

The author does not undertake to say what this or that abnormal sight, sound or touch may mean. He tries to teach the student just what the condition of each region or organ should be when perfectly healthy, normal.

When once that picture, touch or sound is indelibly fixed in the memory, every slightest deviation therefrom is *abnormal,* and means that something is wrong. What the deviation from health portends; whether it is caused by a mere disorder or a grave disease, other text-books can show the student very promptly.

To the reviewer, the book seems to possess great merit. One might almost say that the student who is thoroughly saturated with the normal, anatomic conditions and apearances so clearly set forth therein, is as ready for the etiology, pathology, and diagnosis of disease as any study of physical diagnosis can make him.

If diagnosis is, as Meigs once said, the club of Hercules wherewith medicine slays the giant disease, this little book will furnish an efficient handle to the club.

The chief trouble with it is that it is so interesting that one is tempted to read instead of studying it, which is not wise.

A MANUAL OF OBSTETRICS. By A. F. King, A.M., M.D., LL.D. Eleventh Edition, Revised and En-

larged Lea & Febiger, Philadelphia and New York.

The author has greatly enhanced the value and usefulness of his former editions by revising and enlarging the text. It occupies the intermediate sphere between the compend and elaborate reference work, making it an especially valuable text for students and reference book for the busy obstetrician. Special additions are chapters on pubiotomy, spontaneous version of the position and the factors of thigh pressure upon the abdomen, considered as one of the auxiliary forces of labor. The section on hyperemesis has been rewritten and enlarged. Every student and obstetrician should be in possession of this valuable work.

A Manual of Cystoscopy. By J. Bently Squier, M.D, and Henry G. Bugbee, M.D. With twenty-six Original Plates, Eighteen of which are Colored. Published by Paul B. Hoeber, 69 East 59th Street, New York. $3.00 net.

This is a small but elegant piece of bookmaking, containing sixteen pages of fine, heavy paper, left entirely unocupied, probably for the convenience of investigators who may desire to make notes of their own observations, and 117 pages of beautifully printed text and illustrations, most of them colored with lifelike fidelity. The necessary instruments and appliances, together with the technique of their use, is all pictorially displayed, and the pathological conditions revealed by the cystoscope are shown in size, form and color so true to nature that they are tantamount to clinical demonstrations.

Particular pains is taken to describe and delineate the entrances to the *ureters*. The reviewer holds that no man should ever undertake to introduce a ureteral catherter through a cystoscope until he has first carefully and repeatedly practised upon the cadaver, but if any other sort of teaching besides such a training could ever justify one in undertaking this delicate, and not always harmless procedure, it would be the teaching provided by such a book as this.

It is, in every respect, a beautiful book. Paper, printing, pictures and binding are strictly *de luxe*. Though a small book, it is worth every cent of its price to whomsoever may be in need of such literature.

The Practice of Surgery. By James G. Mumford, M.D., Instructor in Surgery in the Harvard Medical School. Octavo of 1015 pages, with 682 illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $7.00 net; half morocco, $8.50 net.

"*Curiosities of surgery* should be known, but their infrequency will limit their familiar study by the average practitioner."

The foregoing quotation from the Preface to the book under review is a key to the plan and structure of the entire work. Add to this the policy adopted by the author of avoiding unnecessary elaboration of the principles of surgery, and devoting scrupulously exact and thorough study to its practice from a standpoint of clinical exposition, and you have a clear comprehension of the high quality and intensely practical character of Dr. Mumford's contribution to surgical literature in this particular instance. Twenty-five chapters are devoted to major surgery, including that of the reproductive and genito-urinary organs, carefully considered region by region. Six chapters are allotted to minor surgery, and it causes a gasp of surprise in a surgeon whose original instruction was received a generation or so ago, to notice that *amputations* are relegated to the last chapter in that division.

The subject that twenty-five years ago occupied the chief place in surgical teachings is now detailed in some twenty pages at the tail end of a text-book written by one of the leading teachers of the day.

Surely the brains of Harvard are not moss grown, however so may be her classic walls. The illustrations and the text of the entire work are characterized by simplicity and force. Any man who is in a position where it is often desirable that he shall turn to the very latest improvements in the standard operations, without having to wade through seas of speculation to find the pearl of practical fact, will find this book a treasury of valuable knowledge, gleaned from many years of superb opportunity, and condensed by one who is a past master in the art of imparting knowledge to others.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph.D., Professor of Bacteriology, in the University of Chicago and in Rush Medical College. Second revised edition, octavo of 594 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $3.00 net.

The general tone and object of this book is tersely expressed in the following paragraph culled from the introduction:

"The penetration of this realm of obscurity by the discoveries of bacteriology gave the human race for the first time in its history a rational theory of disease, dispelled the myths of spontaneous generation, and set the process of decay and kindred phenomena in their true relation to the great cycle of living and non-living matter."

The work is full of practical instruction so clearly illustrated that the combination of text and picture approaches the excellence of laboratory demonstration. Many different kinds of apparatus are thus described and illustrated in action. Particular pains is taken to show clearly the different methods of obtaining pure cultures, so that only one kind of germ shall exist in a culture at the same time.

A valuable feature is the *Descriptive Chart* prepared by a committee for the *Society of American Bacteriologists*.

It contains full notes for the identification of bacterial species; a *Glossary of Terms; A Numerical System of Recording the Salient Characters of an Organism*, whereby a number or a decimal stands for a phrase; morphology, pathogenicity, etc. The extraordinary toxicity of bacterial poisons is vividly impressed by a comparison, which shows that the amount of strychnine that would kill an adult man would weigh about twenty times as much as the amount of tetanus toxin required to cause the same fatal result. Less than the 1-100 part of a grain would be enough.

The tetanus bacteria, whose metabolic action creates this terrible toxin, yields no clue as to its chemical structure. Its secret is unknown. In view of a possible invasion by bubonic plague, which has, in China at least, thrown off its mask of quiescence and now slays almost every one who contracts the dis-

ease, the bacillus pestis is of more than usual interest. Dr. Jordan gives a clear and succinct account of this dread organism, which in 1348-49 slew twenty-five million people, or one-fourth of all the then existing poulation of Europe. Attention is also given to the immunizing serum of Yersin and Roux.

There is no good place to stop reviewing this book. It is interesting and practical from cover to cover.

The subject last treated is poliomyelitis, but its pathogenic organism has not yet been discovered.

Biology, General and Medical. By Joseph McFarland, Professor of Pathology and Bacteriology, Medico-Chirurgical College of Philadelphia; Fellow of the College of Physicians, Philadelphia. With 160 illustrations. W. B. Saunders Company, Publishers. Philadelphia and London.

To one whose taste inclines to thought concerning the mysteries of existence, the What, Whence and Whither and the Why of the universe, this book on biology presents a feast of logical reasoning from established premises.

Beginning with "The Cosmical Relations of Living Matter" (what a pregnant phrase!), he passes to speculation concerning the origin of life in which the futility of any theory of spontaneous generation is demonstrated, *all life comes from life is* considered established doctrine, and the experiments and apparatus used in the demonstration thereof are amply described and illustrated.

The criterion of life, the conditions which prove that a substance is endowed with that mysterious principle called vitality, are those formulated by Huxley. First the chemical composition, which must include O. H. N. C. Second, its waste by oxidation and its repair by assimilation of new matter, metabolism. Third, its function of reproduction.

One of its most conspicuous properties is irritability, as shown in the fly-catching plants on the large scale, and by the behaviour of ameboid cells, invisibly small. But it is impossible within the compass of a review to give an adequate impression of the immense scope and value of this book. The single chapter on "The Manifestations of Life" stamp its writer as one of the masters of expression in scientific literature.

The comparison of embryos in functionally similar periods of development is very interesting. The temptation to further analysis and comment is strong, but must be overcome. One more item, too unique to be resisted, must be told though the circumstance perhaps, is not so new to our readers as to the reviewer. To illustrate symbiosis, the dwelling together of two distinct orders of animal life, the author speaks of the "sea anemone so commonly found on the shell of the hermit crab." It seems that when the crab grows too large for its borrowed shell and has to seek a larger one, it tears the anemone from the deserted shell and plants it on the new house it selects for a home. This view of crabs as flower gardeners, though of course well known to naturalists, is entirely new to this reviewer, who is determined to own this book so long as he has a shelf whereon to keep it. No earnest student of life and its problems should be without a copy.

McFarland's Pathology. Published by the W. B. Saunders Co., Philadelphia and London.

The extreme excellence of simplicity characterizes this work, and that, too, without any sacrifice to completeness or correctness. The author, while never dogmatic on mooted questions, states his position in plain, short paragraphs, devoid of disturbing qualifications. That such a complex subject is susceptible of such a clear exposition, shows the volume to be the work of one who not only knows, but knows how to impart what he knows to those less well equipped in the abstruse intricacies of pathological facts and theories. The author has achieved a notable sucess in that he has written a book that appeals to the needs of the neophyte, and at the same time satisfies the requirements of the advanced worker. The division of the matter into two kinds of type, putting the fundamental facts in bold type, and the finer points in small type, adds to the value of the work for the two classes of readers. The illustrations are very helpful, and especially those of histopathology, the cellular changes being clearly delineated. In every way the work deserves our unqualified commendation, in that it accomplishes the end for which it was written, viz.: to teach pathology.

Practical Points in Nursing. For Nurses in Private Practice. By Miss Emily M. A. Stoney, Late Superintendent of Training School for Nurses. Carney Hospital, Boston, Mass. Fourth Edition, revised. 12mo of 495 pages, containing 105 illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $1.75 net.

The first thing Miss Stoney devotes her attention to is the nurse herself.

She tells her what she can do among the poor, where hospital facilities are not. She distinctly says: "The following instructions are not intended for hospital use." The nurse "must be clean, simple, neat, modest, sweet tempered, and know how to mind her own business." She must be cheerful, and "avoid all temptation to airing her own knowledge." She must know an emergency when she sees it, and when to send for the doctor. She must not talk of her hospital days, nor gratify the desire of patients to hear her tell of operations she has seen. She must never mention her experience in other families. If she has any trouble about meals, or assistance, or any circumstance of the place, she must consult only the doctor and rely on him to correct it.

Her manners, her posture when receiving the physician or visiting strangers, her bearing toward a head nurse, her voice, her dress, her equipment, all these things, and many more, are briefly but plainly specified. Quite a system of therapeutics is inculcated, including the administration of anaesthesia, and something like a course in minor surgery is described and illustrated. Indeed every subject is illustrated if capable of being so.

The nursing of infants and children is taught in some twenty pages. A chapter on "Physiology and Descriptive Anatomy" follows, and then come some 420 pages of "Appendix," not at all *vermiformis*, but plump with recipes, prescriptions, dose lists, glossary with liberal definitions; winding up with a competent index.

So you can understand that this is a book that every woman who intends to be a nurse should have, to teach her how; every woman who is already a nurse needs, to recall what she has neglected or forgotten; and every woman who has been but is no longer a nurse, will delight in as a reminiscence.

A BOOK OF PRACTICAL POINTS GATHERED FROM VARIOUS SOURCES. WITH CHAPTERS ON HOOKWORM AND PELLAGRA.

By J. H. McMurry, M.D., Grubbs, Ark. Price, $1.50 net.

The small, well printed volume which, bearing the long title above, solicits the good will and opinion of the medical profession, is different from most of the medical books on the market.

It does not offer to its readers any especially new ideas on etiology, diagnosis, prognosis or treatment. Though it mentions some two hundred subjects it dwells so briefly upon each that the book occupies only two hundred printed pages. These are filled with abstracts from the sayings and writings of eminent persons, chiefly physicians, in different parts of the world, brief space being allotted to each, the whole being illuminated and flavored by the comments and opinions of Dr. McCurry, making altogether a handy volume that is both unique and interesting.

Between every two printed pages is placed a leaf, blank and unnumbered, so that the reader may be tempted to jot down the thoughts or reflections inspired by the adjacent text without having to seek paper or table on which to write. One can readily see how convenient it makes the task of commenting on opinions that are either opposed to or in conformity with one's own. True, the rapid change of subject often reminds one of a dictionary, but in other places several pages are devoted to one purpose, as where in one place eight pages are devoted to a succession of "Prescriptions for the Throat and Nose." In another place five pages are devoted to an account of the various recognized "signs" in diagnosis, such as Romberg's, Bamberger's, etc. In fact every page is either instructive or suggestive, and the facts are gathered from a multitude of acknowledged sources. No one who reads this book will consider its price badly invested.

DAWN OF THE FOURTH ERA IN SURGERY.

By Robert T. Morris, M.D., Professor of Surgery, New York Post Graduate Medical School and Hospital. 12m of 145 pages. Artistically bound. $1.25 net. W. B. Saunders Company. Philadelphia and London, 1910.

We have all read of the sinner who went to church to scoff and remained to pray. Similarly the reviewer, fresh from consideration of imposing tomes full of scientific diction, took in hand the little volume above named, and with a supercilious smile prepared to "review" it.

Diving into the necessary inspection, he was lost. After more than an hour of silent appreciation he suddenly awoke to the fact that he was reading, and reading with interest and approval, every page in the book.

And the said reviewer hazards the following proposition, namely: There is not a surgeon in these United States who will not find in this little volume something that will either confirm a previous idea not generally accepted, or suggest a new conclusion from past experience.

The author has not posed as a lawgiver, but has given his surgical brethren a friendly nudge with the elbow, saying, "just look at experience from this viewpoint for a moment. Doesn't it suggest something?"

It certainly caused the reviewer to think new thoughts about old facts, and he recommends every surgeon to get the book. No need to advise the reading of it. That will work automatically.

THERAPEUTICS

NIGHT SWEATS OF PHTHISIS.—The following prescription, published in Potter's Therapeutics, Materia Medica and Pharmacy, is a compound of some of the most powerful anhidrotics known to medicine, and should afford at least temporary relief from that distressing feature of pulmonary tuberculosis—night sweats.

In the doses recommended it may be safely administered to patients not in a condition of actual collapse from weakness.

R. Acidi Camphorici .....drams II
Atropine Sul. .....grain I.
Acidi Sulph. Aromat. .....fl. Oz. II ss.
Solve et filtre.

Ten drops should be given in a tablespoonful of well sweetened water, or cordial, five or six hours before the proper time for sleep.

The objection to the mixture is that it causes dryness of the mouth and fauces, sometimes to an unpleasant degree.

Another prescription which acts very happily to prevent the night sweats is the following:

R. Acidi Camphorici .....11 drachms
Ft. Capsules No. VIII.

Sig. One capsule two hours before bedtime.

Sometimes, but not in every case, the patient acquires a disgust for camphoric acid to the extent of nausea, or even vomiting.

H. C. Wood highly recommends agaricin by itself for such colliquative perspirations. He says (p. 409), "The only untoward effect produced, even by the largest dose, is irritation of the gastro-intestinal canal. Two to

five grains of the agaricin may be given three times a day, commencing with the smaller dose and increasing." Agaricin commonly means agaric acid, which is the preparation meant by Wood. A purer, more concentrated article is sometimes found, bearing the same name, but the dose is only about 1-15 of a grain. Great care should be observed to differentiate the two.

ANTIPYRETICS.

ANTIPYRETICS VERSUS FEVER.—Ever since it has become known that any body-temperature much higher than the normal is unfavorable to the growth of many of the pathogenic bacteria, it has been held that within reasonable limits fever might possibly be nature's weapon of defense against bacterial multiplication. But there can be too much of anything, however useful it may be on general principles, and the discomfort experienced by some individuals when under the influence of even a moderate degree of fever indicates that its good or ill effect depends very much upon the condition and constitution of the patient.

Thus one case will be restless, gloomy, thirsty and altogether uncomfortable with a temperature of not over 99.5-10 degrees, while another will be calm and cheerful at 102 degrees F.

This peculiarity under circumstances of trivial import may be magnified accordingly as the condition becomes more serious. Then yielding to the dictates of common sense, we must govern ourselves accordingly.

Where no discomfort ensues though the thermometer marks even up to 103.5, the patient is not suffering any injury, unless the quiescence is caused by stupor. But where the fever does cause stupor, or great restlessness, or other evidence of discomfort or distress, therapeutic interference is imperatively demanded. Antipyretic measures must be taken.

There are more ways than one to cool a high fever. We can do so by abstracting the excess of heat, just as we would cool a beverage that is too hot for drinking, by placing the surface in contact with colder objects, as we would pour the scalding coffee into a cool cup; we can also take advantage of evaporation by exposing the surface of the body, or the wet sheet covering it, to currents of air.

And finally, as we can turn down the flame under the coffee boiler, so can we diminish excessive heat production in the body by the use of medicinal antipyretics that control the heat-producing centers. We can sometimes advantageously combine two or more of these methods at the same time.

The consumamtion of the principle of the heat abstraction is the so-called "Brand bath." In its unmodified form it consists in immersing the patient every three hours in water at 70 degrees F. whenever his fever reaches 102 or 102.5 degrees F., and keeping him there ten to twenty minutes, briskly rubbing the entire surface with naked hands during the bath. The rubbing is chiefly to expedite the exchange in the vessels of hot blood for that cooled by the cold water. When the temperature falls to 101 degrees or 100 degrees F., the patient is removed from the bath, dried and placed on a blanket and covered with a sheet. The sheet must be absolutely dry. Before the bath he is given one or two tablespoonfuls of good whisky or brandy in a little milk or water, and an ice bag *must* be kept in close contact with his head during the bath to prevent cerebral congestion. If chilliness, cold extremities and pinched bluish skin persist after the bath, more whiskey is given, a hypodermic of atropine is administered and hot bottles applied to the extremities. This method is so troublesome and, with heavy patients, difficult, that in spite of its extreme efficiency it is not very generally adopted except in hospitals or sanatoriums. Also some of its features are undesirable, such as the persisting shock to patients of nervous temperament, frequent slowness of reaction, danger to weak hearts or ulcerated intestines, and

cerebral congestions. The general consensus of opinion among physicians, so far as using the Brand bath in practice in the homes is concerned, may be expressed in these words, "It must be modified." If used at all the water must be at not less than 85 to 100 degrees F., and slowly cooled to not lower than 75 degrees F. The preliminary stimulant may be 1-30 grain of strychnine hypodermically, and the ice cap and friction must be maintained. These conclusions are reached from the personal but verbal expressions of many physicians actively engaged in practice. The truth is that in family practice other antipyretic means are generally resorted to. Whenever the teeth chatter or cyanosis appears, dry the patient and put him to bed with hot bottles, and give him no more immersions.

The sponge, or towel bath, when properly used, is quite efficient, though not equal to Brand. It is not entirely without the element of shock, followed by reaction, which is claimed to be the most valuable effect of immersion, for a cold, wet sponge or towel swept over a limb causes the same involuntary contraction of tissue, and subsequent relaxation, but being momentary and limited in extent, it does not have such a depressing effect upon the heart nor mass so much blood in the intestinal and cerebral vessels.

All doctors object to giving drugs internally for the reduction of fever temperatures, yet all doctors give them, the chief difference between them in that respect being in the comparative frequency with which they resort to their use.

It is a recognized fact that a free and continued administration of acetanilid, acetphenetidin, or antipyrin and their compounds tends not only to weaken the heart, but also to injure the red corpuscles of the blood in some way that can ultimately destroy them, producing a condition characterized by hematoporphynuria. This is recognized by a bright, porphyry-red color of the urine and an increasing degree of general collapse, ending in death. In spite of their drawbacks the so-called coal tar antipyretics continue to be largely used. The fact that they also possess the power to relieve neuralgic pains has made them popular with the laity, who often use them recklessly. The writer has seen a man with sick headache pour 20 or 30 grains of acetanilid from a wide mouthed vial into the palm of his hand, lick it up and swallow it with a draught of water. Soon he would turn blue and seem stupid and weak, but his headache would be gone. That was ten years or more ago, and he is still living.

Such excesses cannot always be harmless.

(Antipyretics to be concluded.)

ABSTRACTS AND COMMENTS

Underfed School Children.

That large numbers of school children are undernourished is a statement which no longer admits of dispute. The fact has long been recognized and dealt with in Europe, and now we of the United States are waking up to conditions that cry aloud for action. At a moderate estimate, probably 2,000,000 of our children between the ages of five and fourteen years (nearly 12 per cent of the total number of that age) are underfed. A recent investigation in New York City warranted the assumption that, at a low estimate, 10 per cent of our school children suffer from malnutrition.

Do we, I wonder, grasp the full significance of this fact? The pity of it is obvious; but, unfortunately, the suffering of the individual child is only one aspect of a many-sided evil that threatens the community at more than one vulnerable point. Food, one expert tells us, is at the base of most of the evils of child

degeneracy. Poor and inappropriate food, says another, is responsible for more ill health, classroom stupidity and backwardness than any other one injurious influence of modern city life. And again, one of the most striking things about undernourished children is their vulnerability. They "take" everything, and offer very little resistance to any acute infectious disease which they may contract.

It is not difficult to count the ultimate cost to society of these underfed children—in other words, the degenerate, the mentally defective, the tubercular, who form so large a percentage of the total child population of our modern city. The degenerate child, beginning as a moral canker among its playmates, ends by taking the city's money for its support in reformatories and prisons. The children who catch every disease spread these diseases broadcast before they themselves are gathered into hospitals—at the expense of the community. The tubercular, the anemic, the mentally deficient, take two years to do one year's work, or are taught in special classes; all of which means extra expenditure of city money. In every case we are confronted with the expense to the community—expense in health, in morals, in money—of the undernourished child.—*From "The Vital Question of School Lunches," by Mary Josephine Mayer, in the American Review of Reviews for April.*

The pitiful condition described by the *Review of Reviews* is probably duplicated in a small way in two or three of the larger cities in the South, which should help to console us for the fact we have very few cities large enough to allow their school children to go to school hungry and the surrounding population remain in ignorance of the fact. If the people of even New Orleans or Birmingham, and they are sizeable towns, were to learn of such a condition in one of their public schools, it would simply *rain* hog and hominy in that school until the destitution was corrected. Last month, in a city smaller than those, a policeman found a mother and two daughters actually needing food. It was such a novelty that he told a reporter and he told his editor, who told the public; and that ended that case of suffering. No, people in the South don't often go hungry themselves nor let others, especially children.

TYPHOID INOCULATION.

Journal American Medical Association, November 19, 1910. Anti-Typhoid Vaccination. By George B. Foster, Jr., M.D., First Lieut. Med. Corps, U. S. Army, Washington, D. C.

In a brief but pregnant article, Dr. Foster concludes as follows:

If 1,300 men, anywhere, were kept in camp with perfect sanitary conditions, one or more cases of typhoid would develop.

"Three per cent of those recovered from typhoid fever continue, indefinitely, to excrete typhoid bacilli capable of infecting others."

Between March, 1909, and October, 1910, 12,000 persons have been inoculated with antityphoid vaccine in the U. S. army. Each cc of the prepared substance is standardized to contain 1,000,000,000 bacilli, sterilized at a temperature of 56 C. for one hour. Before practical use it is tested upon guinea pigs. Three inoculations, ten days apart, 0.5 cc being hypodermically administered the first time, and a full cc at each of the subsequent injections. One instance of results is instructive.

Of a certain batalion 92 members were inoculated, 24 were not. All served in the Gettysburg maneuvers June, 1910, being inoculated on the 14th of the same month. Within thirty days 25 per cent of the uninoculated men developed typhoid fever, while of those inoculated *not one was attacked.*

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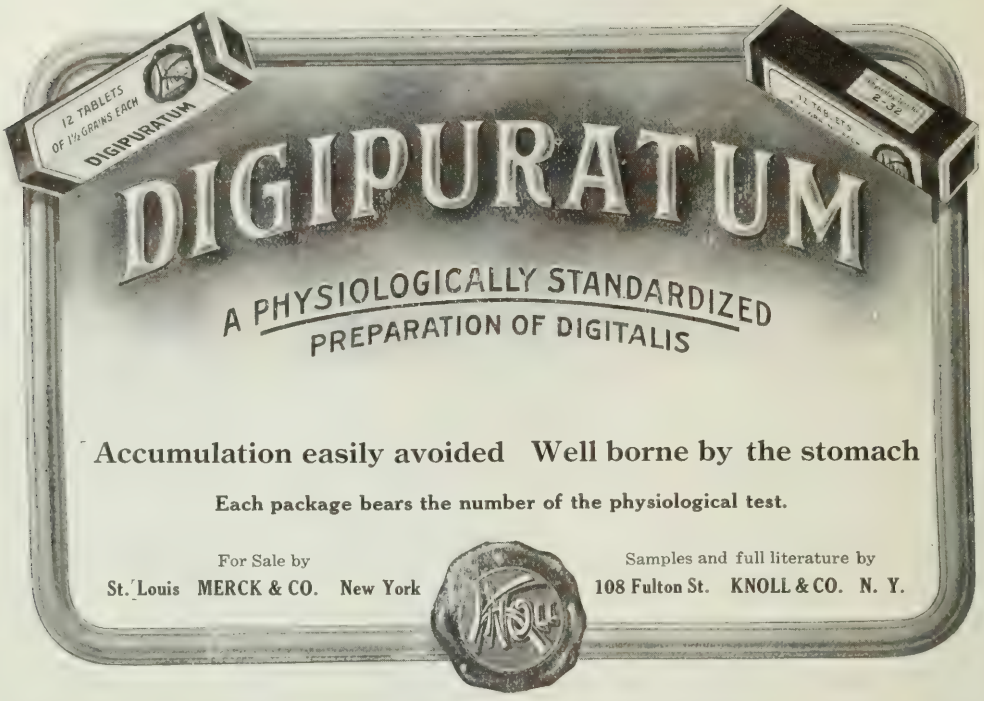
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"The kind they all admire."
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Unlike other goods, ask your physician.
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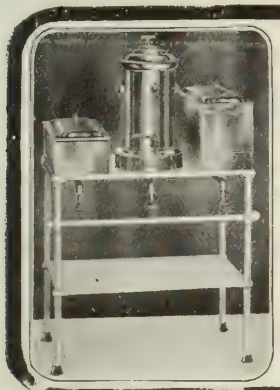

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Rochester Sterilizing Outfits

The Dressing Sterilizer of a Castle Outfit can be used as a complete combination sterilizer. The physician can lift it from the stand, pack his gown and dressings in it, and carry it to the house of the patient. There it can be set on a kitchen range, if no other method of heating is at hand. While the dressings are being steam sterilized in the upper part, instruments can be boiled in the base.

The illustration shows the Three-Piece Outfit. For circulars describing the Castle Outfits ask your instrument dealer, or address

Wilmot Castle Company
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is invariably the way almost every electrotherapeutist would start out if his advice was sought regarding the installation of an electrical equipment.

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VICTOR **WALL PLATE or CABINET**

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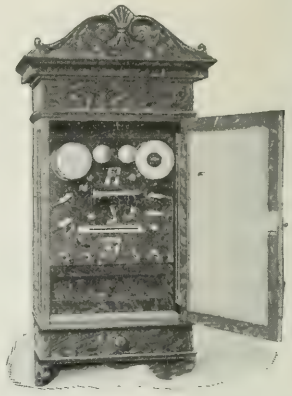

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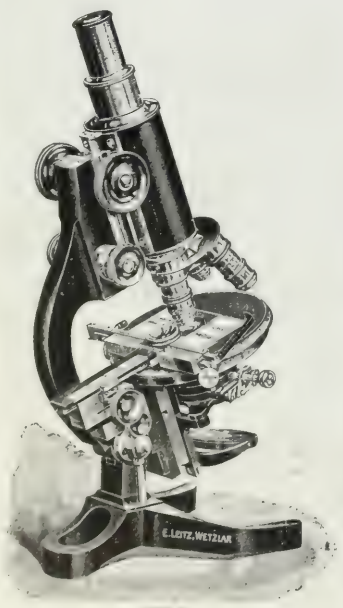

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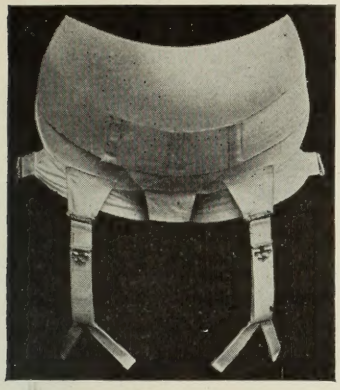

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THE MARVEL "WHIRLING SPRAY" SYRINGE

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Utter perfection involves the solving of a myriad problems, of which asepsis is the most important.

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It has required the invention of vacuum sterilizers.

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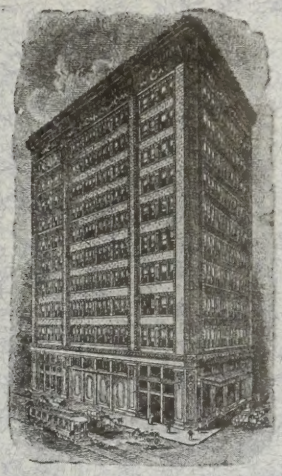

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Our stock the most comprehensive. Our prices are right---our goods the best.

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The treatment of amylaceous dyspepsia is one of the real problems in therapeutics. Examples of this type of indigestion are numerous. They constitute considerably more than one-half of all the cases of dyspepsia for which the physician is ordinarily called upon to prescribe. Usually they are of an obstinate character—the *chronic* character.

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